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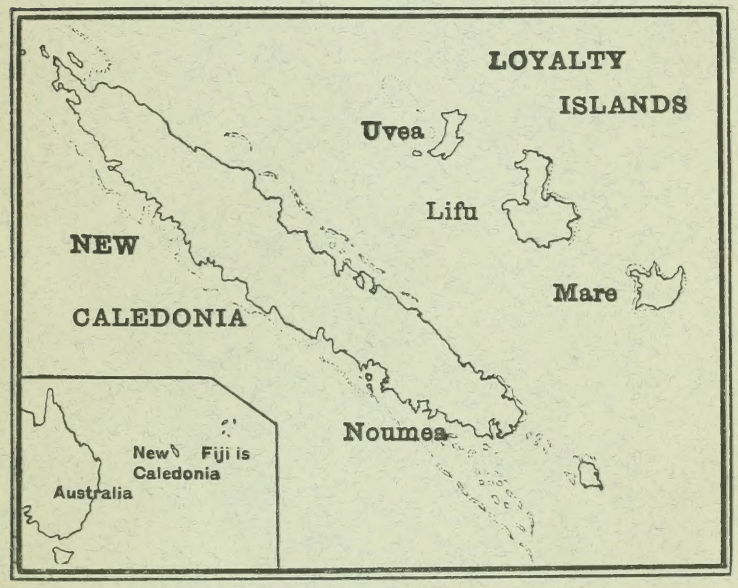

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OF

THE HADFIELD COLLECTION OF SHELLS

FROM THE

LOYALTY ISLANDS.

PARTS II. AND III.

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CATALOGUE

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OF

SHELLS

FROM

LIFU AND UVEA, LOYALTY ISLANDS.

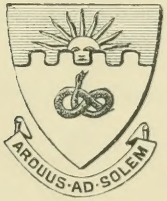
BY

JAMES COSMO MELVILL, M.A., F.L.S.,

AND

ROBERT STANDEN.

PARTS II. AND III.



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1897.

INTRODUCTION.

During the past few years large collections of the shells of Lifu and Uvea have been made by the Rev. James and Mrs. Hadfield, and have been consigned to several Manchester conchologists. By the kindness of Messrs. R. D. Darbishire, R. Cairns, and W. Moss, a very complete series of these shells has been presented to the Manchester Museum, which possesses in addition the types of the majority of the new species here described, though a few remain in Mr. Melvill's cabinet. They have been arranged for exhibition, and a list of them, with notes and descriptions of new species, was drawn up by Mr. J. Cosmo Melvill (a member of the Committee of the Manchester Museum), and Mr. R. Standen (of the Museum staff). As the collection is one of the largest and most important that has been received in this country from the Loyalty Islands, it has been thought desirable to afford the naturalists of Manchester and elsewhere an opportunity of obtaining separate copies of this catalogue, and it has therefore been reprinted from 'The Journal of Conchology' and issued as one of the Museum Handbooks.

Since Part I. of this catalogue was published, further consignments of shells have been received, which have increased the number of species recorded from 630 to 860. Under these circumstances it seemed desirable to issue a continuation of the catalogue in the same form as before.

William E. Hoyle,
Keeper of the Museum.

With the Compliments of

WILLIAM E. HOYLE,

Keeper of the Museum,

The Owens College,

MANCHESTER.

NOTES ON A COLLECTION OF SHELLS FROM LIFU AND UVEA, LOYALTY ISLANDS, FORMED BY THE REV. JAMES AND MRS. HADFIELD, WITH LIST OF SPECIES.

Part II.

By JAMES COSMO MELVILL, M.A., F.L.S., and ROBERT STANDEN.

(Read before the Conchological Society, October 14th, 1896).

Murex (Ocinebra) brachys sp. nov. (Pl. IX., fig. 1).

M. testa minuta, ovata, solida, pallidé ochracea, anfractibus sex, corrugatis, supernis spiraliter unangulatis, nodulosis, ultimo anfractu undecim varicoso-costatis, costis fimbriatis, apud basim paullum producto, apertura ovata, labro extus scruposo, intus quadri-denticulato, columella recta.

Long., 6, *Lat.*, 3 *mill.*

A small, obscure species, six whorled, the upper whorls (excluding the apical) being strongly once angled with prominent nodules, the last whorl with eleven rib-like varices, which are somewhat fimbriate; at the base the canal is a little produced, the aperture is oval, outer lip rough without, within four-denticled, columella straight. Only one specimen. (βράχυς, short).

Nassa (Niotha) rotunda sp. nov. (Pl. IX., fig. 2).

N. testa ovato-globulari, subcompressa, pallidé ochracea, ad apicem attenuata, anfractibus sex, duobus apicalibus, lævibus, cæteris longitudinaliter arcte recti-costatis, costis nodulosis, spiraliter liratis, apud suturas vitta ochracea spiraliter decoratis, et impressis, ultimo anfractu ad basim compresso, apertura rotunda, labro incrassato, intus denticulato, canali brevissimo, calloso-incrassato, ad basim extremam fulvo-ochraceo suffuso.

Long., 6, *Lat.* 3 *mill.*

A small, very compact globular species, attenuate, however, towards the apex, the remaining whorls, which are compressed at the sutures, being very closely papillose with regular longitudinal papillary ribs, spirally crossed with liræ, the canal is very short, callous at the base and stained dorsally with darker ochre-brown, mouth round, outer lip denticled within with teeth that extend as striæ some way into the aperture. Five specimens.

Nassa (Telasco) Shacklefordi sp. nov. (Pl. IX., fig. 3).

N. testa ovata, lævissima, candida, polita, anfractibus septem, paullum tumidulis, perlævibus, nitidis, ad suturas indistincte ochraceo-maculatis, ultimo dorsaliter ad basim sub lente transversim striatulo, et notis clathratis immersis ferè celatis, decorato, clathris sub lævissima superficie infra suturas et iterum ad basim calcareis, interstitiis gradatis, ochraceis, apertura ovata, labro extus paullum incrassato, intus decem denticulato, et continuo-striato, dente vel plica suturali, margine columellari ad basim bidenticulato, peristomate vix calloso, canali brevi.

Long., 13, *Lat.* 5 *mill.*, *sp. maj.*

A polished white shell, usually seven whorled, most of the many specimens are, however, somewhat worn or broken at the apex, the aperture is ovate, peristome hardly callous, outer lip thickened and much denticulate within, the denticles extending in the form of striæ far into the mouth. There is a sutural tooth, and the columella is twice denticled towards the base, the canal being short. Occasionally pale ochraceous transverse spots exist round the sutures, and, dorsally, upon the last whorl a beautiful latticed pattern is with a lens observable in the smooth substance of the polished shell, this pattern being absent in the middle of the whorl.

We have great satisfaction in uniting with this species the name of the Rev. Lewis Shackleford, who has rendered us great assistance in many ways.

N. (Telasco) ecstilba sp. nov. (Pl. IX., fig. 4).

N. testa ovato-fusiformi, concinna, candida, nitida, ferè lævi, anfractibus septem, duobus apicalibus, cæteris subturritis,

paullum ventricosis, longitudinaliter paucicostatis, costis lævibus, interstitiis sub lente spiraliter indistincte striatis, interdum lævissimis, in hac specimine inter medium suturasque anfractuum zona indistincta spirali succingente, in illa absente, in omnibus infrá suturam anfractus ultimi ochraceo-maculato, tæniaque ochracea apud medium accincta, simul ac ad basim extremam, apertura rotunda, labro incrassato, dorsaliter ochraceo-bimaculato, intus denticulato, columellari margine callosa, abbreviata, canali brevi.

Long., 10, *Lat.*, 5 *mill.*

Several specimens of a neat, white, shining *Nassa*, not unlike the *N. Cuvieri* Payr. from the Mediterranean, and possibly identical with *N. casta* Gould, an authentic specimen of which we cannot find represented in our museums. The whorls are seven, few ribbed, longitudinally and indistinctly spirally striate, but the shell gives the impression of much brightness, whiteness, and smoothness. The outer lip is denticulate within, thickened without, and with two brown blotches dorsally. The columellar margin is callous, white, shining. In some specimens a thin brown line is seen above the sutures, in others it is absent, but all have a brown ochre blotch just below the suture of the last whorl, about the centre of the back of the shell. (ἐκστίλβος shining).

Columbella (Seminella) Pacei sp. nov. (Pl. IX, fig. 5).

C. testa parva, compacta, albida, anfractibus sex, arcté longitudinaliter costulatis, costis spiraliter clathrato-liratis, antepenultimo anfractu suprá, juxta suturas, simul ac penultimo spiraliter et regulariter squarrosé-maculatis, maculis laté flavo-ochraceis, ultimo anfractu apud medium simili modo flavochraceo maculato, in pluribus speciminibus dorsaliter fulvo-suffuso, usque ad basim, apertura augusta, labro incrassato, intus lævi, columella planata.

Long. 4, *Lat.* 1·75 *mill.*

Minute, yet particularly beautiful. Whorls six, compact, clathrate, with close longitudinal riblets and revolving liræ. Just underneath the sutures the ante-penultimate and penultimate

whorls are sparsely spotted with fulvous; in the last whorl the spots again occur towards the middle, but are contiguous to, and below joined with, one large dorsal effusion of the same colour. The mouth is narrow, lip thickened, simple. Several specimens. To Mr. S. Pace our thanks are due, he having given advice concerning the Columbellidæ of this collection, and as a very slight return we would venture to associate his name with not the least elegant of that genus to which he is devoting so much laborious study.

Columbella (Mitrella) sigaloessa sp. nov. (Pl. IX, fig. 6).

C. testa ovata, perlævi, nitida, laté pallidé ochracea, anfractibus sex, ad suturas paullum impressis, lævissimis, transversim infra, juxta suturas, albizonatis, zona fulvo-brunnea sequente, et altera simili supra suturas, ultimo anfractu ad peripheriam laté rufo-zonata, et, infra, duabus similibus zonis accinctis, apertura angulatim ovata, labro extus paullum incrassato, intus multidenticulato, columella puniceo-tincta.

Long., 9, *Lat.*, 5·50 *mill.*

A smooth polished shell, prettily transversely banded with white and rufous, the body colour being very pale ochreous. Whorls six, slightly impressed at the sutures, and entirely smooth. Mouth effuse ovate, outer lip much denticulate within, columella stained with rose. Two specimens, one not so strongly banded.

Near *C. semi-convexa* Lamk. from Australia and *C. gausapata* Gould, this latter being a Central American shell. (σιγαλόεις, smooth, shining).

Scalaria eranna sp. nov. (Pl. IX., fig. 7).

S. testa perforata, fusiformi, sub-turrita, sordidé albida, anfractibus septem, apicalibus duobus vitreis, cæteris compressulis, arcté lamellatis, lamellis bi- vel tri-crenatulis, undulatis, interstitiis lævibus, apertura ovato-rotunda, peristomate incrassato, extus undulato-rugoso, basim ad columellarem paullum extenso.

Long., 4·50, *Lat.*, 1·50 *mill.*

A highly interesting little shell. It is narrowly umbilicate, fusiform, roundly turreted, dirty white, seven whorled, two being apical and glassy, the rest somewhat compressed, closely varied, the lamellæ twice or thrice crenulate or undulose, the spaces between are smooth, the aperture roundly oval, the lip is thickened, without wavy-wrinkled, and towards the columellar base it is slightly produced. Seeming from the figure to be near *S. soluta* Ad. One specimen, but quite full-grown. (ἐραννος, lovely.)

S. exomila sp. nov. (Pl. IX., fig. 8).

S. testa imperforata, parva, gradato-fusiformi, turrita, albida, versus apicem attenuata, anfractibus sex, undique arcté lamellatis, lamellis crassis, albis, interstitiis sub lente transversim striatulis, apertura rotunda, peristomate lævi, crassiusculo, continuo.

Long., 4, *Lat.*, 1·50 *mill.*

A minute, but full-grown species, with distinctive characters, the whorls are turreted, attenuate towards the apex, contracted at the sutures. The lamellæ are thick, dirty white, slightly angled below the sutures, and very finely striate at the interstices. Mouth round, peristome thickened, smooth and continuous. (ἐξόμιλος, a stranger).

Drillia ione sp. nov. (Pl. IX., fig. 9).

D. testa incrassata, fusiformi, pallidé violacea, apud basim paullum expansa, anfractibus septem vel octo, ventricosulis, apud suturas impressis, longitudinaliter crassicostatis, costis paucis, spiraliter undique tenuissimé liratis, interdum dorsaliter brunneo suffusis, interstitiis sub lente mire decussatulis, apertura lata, ovali, labro exteriore incrassato, transversim striatulo simul ac in anfractibus, canali brevi, lato, margine columellari simplice.

Long., 5, *Lat.*, 3 *mill.*

A chaste pale violet species, with occasional brown dorsal shading, small, of thickened fusiform build, longitudinally thickly costate, the costæ few in number. Sometimes, indeed, the ground colour is pale-brown or ochre, while other specimens

are pure white. Whorls seven or eight, slightly ventricose, uniformly spirally lirate, the interstices when viewed with a lens being beautifully decussate. Mouth wide, outer lip thickened, transversely striate, as are the whorls, columellar margin simple, canal short, wide. About ten or twelve specimens. (*Ione* from Ἰόν a violet).

Drillia themeropis sp. nov. (Pl. IX., fig. 10).

D. testa fusiformi, solida, percrassa, anfractibus septem (quorum apicalibus duobus), ventricosis, ad suturas crenulato-impressis, longitudinaliter crassi-costatis, ultimo anfractu costis ad medium et infra evanidis, undique transversim tenuissimè-striolatis, interstitiis lævibus, in uno specimine colore livido-cinereo, in altero læte ochraceo, ultimo anfractu spiraliter albo-cinereo cingulo vittato, interdum penultimo simili modo decorato, et apud basim hic illic albisparso, apertura ovata, labro exteriore multum incrassato, sinu perobscuro, columella simplice.

Long., 5, *Lat.*, 2 *mill.*

In marking, this small species is a little like the well-known *D. vidua* Reeve, in comparison to which it stands a veritable pigmy. Two forms have been seen by us, differing in colour as follows:—In what would be considered the type, an ashy brown is the prevailing hue, filletted round the whorls transversely with bluish white; in the other, a handsomer variety, a warm ochre with flecking and median brown linear banding round the three last whorls, which are seven in number altogether. Form oblong, very solid, obtusely ribbed with fine spiral striolations, outer lip extremely thickened, inner simple. (θεμέρωπις, grave, sedate, from the sombre appearance).

D. xanthoporphyria sp. nov. (Pl. IX., fig. 11).

D. testa fusiformi, solidiuscula, parum nitente, anfractibus octo, quorum duobus apicalibus, brunneis, lævibus, cæteris pallidè violaceis, apud medium flavida zona accinctis, ventricosis, apud suturas crenulatis, longitudinaliter crassicostatis, costis obtusis, et spiraliter arcté filostrialis, apertura ovata, peristomate percrasso brunneo-strigato, sinu obscurissimo.

Long., 6, *Lat.*, 5 *mill.*

One of the gems of the collection. Solid, in form fusiform, eight-whorled, two whorls being plain brown, small, apical, while the remainder are usually obtusely ribbed longitudinally, crossed with fine spiral lines, the colour is pale violet or purple, with a broad fulvous-yellow zone encircling each whorl, the lip is extremely incrassate, striped with brownish yellow, and the sinus is hardly perceptible.

Two specimens, precisely like each other. (The name is derived from the Greek signifying yellow—purple, in allusion to the bright coloration).

Mangilia agna sp. nov. (Pl. IX., fig. 12).

M. testa anguste oblonga, attenuata, fusiformi, albo-lactea, interdum dorsaliter ochraceo-effusa, subpellucida, eleganti, anfractibus septem vel octo, ventricosulis, conspicué paucicostatis, costis rectis, longitudinaliter decurrentibus, transversim delicatissimé tenuistriatis, striis costas omnino accingentibus, apertura obliqué oblonga, sinu inconspicuo, labro extus effuso, incrassato, intus cum columella applanato.

Long., 5·50, *Lat.*, 2 *mill.*

A pure milky white much attenuate species, sometimes with a pale ochraceous dorsal clouding, longitudinally few ribbed, the ribs decurrent and descending in the same plane from whorl to whorl, transversely very finely striolate, the striæ surrounding the whole shell, including the ribs. The mouth is obliquely oblong, outer lip effuse, and, as well as the columella, quite simple within. (ἄγνος, castus).

M. bascauda sp. nov. (Pl. IX., fig. 13).

M. testa ovata, solidiuscula, pallidé ochracea, anfractibus sex, apicali simplice, lævi, cæteris longitudinaliter obliqué crassicostatis, et spiraliter acutiliratis, interstitiis minutissimé decussatis, apertura peroblonga, sinu suturali, inconspicuo, labro extus multum incrassato, fimbriatulo, intus septem vel octo denticulato, columella recta, simplice.

Long., 5·50, *Lat.*, 2·50 *mill.*

A pale ochraceous oval *Mangilia*, more like one of the section *Cythara* than *Clathurella*, ovate, with somewhat rounded

whorls, the apical simple, smooth, the rest obliquely thickly costate, with transverse acute liræ, the interstices extremely minutely decussate, the mouth is oblong, the sinus small, only half-hollowed out of the outer lip, and not extending across, the lip is much thickened, fimbriolate, within seven or eight denticled, columella straight, simple. A good many specimens. (*Bascauda* etymologically is interesting, as being an old British word, signifying a wicker basket; and subsequently Latinized *cf.* Juvenal xii.46, Martial xiv.9.9, and in more recent times again anglicized).

M. calathiscus sp. nov. (Pl. IX., fig. 14).

M. testa fusiformi, apud apicem attenuata, tenui, delicata, gradato-turrita, anfractibus octo, quorum tribus apicalibus, simplicibus, lævibus, minimis, cæteris crassicostulatis, transversim elegantissimé clathratis, gemmulatis, albido-crystallinis, hic illic sparsim ochraceo-tinctis, apud basim gemmulo-tuberculatis, canali recurvo, apertura sinuosa, sinu excavato, amplo, labro extus crenulato, intus octo denticulato, columella paullum obscuré denticulata.

Long., 6, *Lat.*, 2 *mill.*

An exceedingly graceful, delicate, crystalline shell, with thickened longitudinal ribs, and acute spiral liræ, the whorls being eight in number, of which three are small, and apical. The sutures are much impressed, whorls slightly tumid, canal recurved, aperture sinuate, sinus broad and excavate, outer lip crenulated without, eight denticled within, columella feebly and obscurely denticulate likewise. A very few specimens. (*Calathiscus*, a wicker basket).

M. eumerista sp. nov. (Pl. IX., fig. 15).

M. testa ovato-oblonga, lævissima, albida, nitida, anfractibus sex, ventricosis, longitudinaliter rotundi-costatis, costis lævissimis, ultimo anfractu infra, juxta suturas, inter costas ochraceo-punctato, lineis spiralibus semi-pellucidis ornato, apertura angusta, oblonga, labro extus incrassato, intus multidenticulato, columella etiam multi-denticulata.

Long., 6, *Lat.*, 2·50 *mill.*

A pure white ovate species, very smooth white and shining, whorls six, ventricose, roundly longitudinally costate, on the last whorl there are just below the sutures brown spots between the costæ in one transverse line, and also sub-pellucid linear marking; the outer lip and columella are both much denticled. Sinus not very deep or conspicuous. Three specimens. (εὖ well, μέριστος separated).

M. himerodes sp. nov. (Pl. IX., fig. 16).

M. testa pergracili, subcrystallina, tenui, fusiformi, anfractibus septem, quorum duobus apicalibus, vitreis, lævissimis, cæteris gradato-turritis, infra suturas abrupte angulatis, longitudinaliter costulatis, costis regularibus, obliquis, undique spiraliter delicate liratis, liris acutis, interstitiis sub lente longitudinaliter striatulis, ad angulum anfractuum pallide ochraceo-tinctis, et apud medium anfractus ultimi ochraceo cingulo, dorsaliter evanido, sed conspicuo ad labrum exterius decoratis, apertura oblonga, angusta, labro extus incrassato, columella simplice, recta.

Long., 6·50, *Lat.*, 2·50 *mill.*

This species is on the border-land between the subgenera *Glyphostoma* and *Cythara*. A pure white, extremely delicate little species, subvitreous, fusiform, with seven whorls, two of which are glassy and apical, the remainder being all very delicately ribbed, with spiral liræ, the interstices longitudinally striolate. At the sutures and the angle of the whorls there is a pale ochre band, again appearing, but almost obsoletely, in the middle of the last whorl. It is very conspicuous, however, just at the back of the outer lip. The mouth is narrow, outer lip thickened, columella simple. Many specimens. (ἱμερώδης, pleasing, desirable).

M. himerta sp. nov. (Pl. IX., fig. 17).

M. breviter pyramidato fusiformi, parva, delicata, anfractibus sex, quorum duobus apicalibus, albo-vitreis, cæteris pallidissime flavo-ochraceis, infra, juxta suturas, conspicue angulatis,

apud suturas quasi-crenulatis, costis longitudinaliter crassis, paucis, accinctis, transversim conspicuè pauciliratis, interstitiis lævibus, ad suturas regulariter brunneo-sparsis, simul ac apud medium anfractus ultimi punctis regularibus, et dorsaliter ad medium labri exterioris brunneo-maculatis, apertura angusta, oblonga, sinu lato, labro extus incrassato, columella simplice.

Long., 4, *Lat.*, 2 *mill.*

This little shell has much in common with *M. himerodes*, described in this paper, but is smaller and of a pale yellow-ochre colour throughout. The whorls are angularly turreted, they are six in number, including the two vitreous apical whorls. At the sutures there is a quasi-crenulation, owing to the commencement of the prominent longitudinal ribs, there crossed by acute liræ, the interstices being smooth. Faint brown transverse spots adorn the sutures and the middle of the last whorl; the back of the outer lip is likewise ornamented with one ochre median blotch and faint signs exist in some specimens of another, or, indeed, two more alternating with white, both above and below the median blotch just mentioned. We have a near ally of this species from Bombay, still undescribed. (ἱμερτός, pleasing).

M. orophoma sp. nov. (Pl. IX., fig. 18).

M. testa turrita, angusta, parva, nitida, pallidé-brunnea, anfractibus sex (apicalibus?) cæteris infra suturas angulatis, apud suturas impressis, rectis, longitudinaliter recticostatis, costis paucis, spiraliter liratis, liris in penultimo anfractu sex, in ultimo novem, interstitiis lævibus, apud basim tuberculato, canali paullum recurvo minime producto, apertura angusta, sinu amplo labrum excavante, labro extus incrassato, fimbriatulo, intus obscuré denticulato, columella plus minusve simplice.

Long., 3, *Lat.* 1·25 *mill.*

A minute turreted pale brown species, with six whorls, angled just below the sutures, then straight, the straight longitudinal ribs, few in number, are crossed by liræ, conspicuous

and large for the size of the shell, six at the penultimate, nine on the last whorl, and less in proportion (*e.g.* four in the antepenultimate) on the other whorls. Mouth narrow. Sinus large and hollowing across the outer lip; which is somewhat thickened and obscurely toothed within. Very rare. (ὀρόφωμα, a thatched roof).

M. stibarochila sp. nov. (Pl. IX., fig. 19).

M. testa angusta, fusiformi, crassiuscula, anfractibus sex, quorum duobus apicalibus, pallidé brunneis, subvitreis, cæteris brunneo-ochraceis, ventricosulis, longitudinaliter crassicostatis, costis albidis, transversim tenuiliratis, interdum, sicut ad peripheriam anfractus ultimi, liris crassioribus, apertura oblonga, sinu amplo, labrum semi-effodiente, labro extus percrasso, ochraceo, superné albo-vittato, columella plana ochraceo-brunnea.

Long., 5, *Lat.*, 2 *mill.*

A small stoutly-built solid species, six whorled, of a lively ochraceous brown, fading into white across the ribs. Some of these are much thickened and crossed by liræ, of which a few are stronger than the others. The mouth is narrowly oblong, sinus wide and half extending across the very thick outer lip which is particoloured, white above, ochre below, the columellar margin clear ochraceous brown, simple.

The only specimen was in the first consignment (1891) of shells from Mr. Hadfield. (στίβαρος thick χεῖλος lip).

M. thalycra sp. nov. (Pl. IX., fig. 20).

M. testa parva, nitida, fusiformi, ad apicem attenuata, anfractibus septem, turritis, ventricosulis, albidis, ad suturas infra et supra, spiraliter ochraceo-vittatis, et ad medium anfractus ultimi simili modo ochraceo-cinctis, longitudinaliter obtusicostatis, costis incrassatis, paucis, transversim spiraliter sub lente tenuistriatis, apertura oblonga, labro exteriore recto, interdum obscuré denticulato, columella ochraceo-tincta, simplice.

Long., 6, *Lat.*, 1·75 *mill.*

A small brightly banded shell, the colour being white, banded with ochre, whorls seven, gradate, longitudinally stoutly ribbed, the mouth oblong, outer lip slightly thickened, columella ochre-tinged plain. Many specimens, mostly somewhat worn. (*θάλυκρος* glowing, from the bright colour).

M. thiasotes sp. nov. (Pl. IX., fig. 21).

M. testa fusiformi, solida, incrassata, alba, læté ochraceo-tincta, anfractibus sex, apicali nigrescente, cæteris apud suturas fulvo-ochraceis, et, supra, juxta suturas, magnopere nodulosis, nodulis perconspicuis, paucis, nitidis, transversim striatis, ultimo in anfractu apud medium simili modo nodulifero, in specie majore nodulis tumescentibus, permagnis his subtus nodulis, ochreo-zonato, duobus nodulosorum minorum ordinibus transversim sequentibus, cum linea nigerrima dorsaliter a margine columellari usque ad basim labri exterioris, labro paullum incrassato, margine columellari simplice, canali brevi.

Long., 7·50, *Lat.*, 2·50 *mill.*, *sp. min.*
„ 8 „ 4·25 „ *sp. maj.*

A very beautiful species, and we know of no pleurotomoid shell which presents the same characteristics. The whorls are six, the apex pitchy black, the remainder being white with bright ochreous tinting. In the younger specimens transverse shining white rows of large gemmæ cross the whorls just above the sutures, and in the middle of the last whorl, below, there are ochre bands, in the last whorl this is followed by two smaller rows of gemmæ, and then by a pitch black line reaching from the upper portion of the columellar margin, across the back of the shell, to the base of the outer lip. The more mature shell is conspicuous for the very swollen row of white peripheral nodules, banded below with fulvous colour. The canal is short, columellar margin simple. (*θιασώτης* a reveller).

M. (Cythara) euselma sp. nov. (Pl. IX., fig. 22).

M. testa fusiformi, attenuata, (in uno specimine latiore), delicatula, pallidissimé ochraceo, anfractibus sex, gradatulis,

apud suturas impressis, unangulatis, longitudinaliter costulatis, spiraliter liratis, junctura costarum minute gemmulatis, ultimo anfractu transversim quadri- vel quinque- brunneo-lineato, penultimo unilineato, apertura oblonga, sinu recto, labrum effodiente, labro extus incrassato, intus minutissimè denticulato, margine columellari recto, simplice.

Long., 4·50 *mill. Lat.*, 1·75 *mill.*

A very delicate species, with beautiful gemmuled ribs, and faint spiral linear brown banding. Of attenuate fusiform shape, pale ochreous, impressed at the sutures, whorls six, gradate, mouth oblong, sinus straight, deep. Outer lip incrassate, minutely denticled within, columellar margin straight, plain. A few specimens. (εὔσελμος, with good benches of oars, from the beautifully gemmuled riblets).

M. (Cythara) psalterium sp. nov. (Pl. IX., fig. 23).

M. testa attenuato-fusiformi, perlævi, gracili, anfractibus septem (?), omnibus longitudinaliter obliqui-costatis, costis lævibus, transversim ochraceo-zonatis apud medium, ultimo anfractu in medio simul ac ad basim simili modo zonato, intusque zonas bi vel tri vittato, apertura oblonga, angusta, labro extus paullum incrassato, intus lævi, columella simplice, obscuré denticulata.

Long., 9·10, *Lat.* 3 *mill.*

A handsome smoothly ribbed shell, attenuately fusiform, whorls probably seven, but only five appear on our broken specimens, an ochraceous band appears in the middle of every whorl, the last whorl two-banded, mouth oblong, narrow, outer lip thickened, inner smooth.

Slightly allied to *M. vexillum* Reeve, but not decussate. *M. gracilis* Reeve, from the Philippines, is of the same shape, and likewise banded in the same manner, but the revolving striæ are perfectly absent in *M. psalterium*. Very rare. (*Psalterium*, a harpsichord).

M. (Cythara) signum sp. nov. Pl. IX., fig. 24).

M. testa brevi, pyramidata, turrita, perlævi, anfractibus sex vel septem, longitudinaliter obliquicostatis, costis lævibus, apud basim propé evanidis, undique transversim ochraceo-multiliratis et zonatis, juxta basim evanidis, apertura oblonga, labro extus paullum incrassato, intus denticulato, columella multidenticulata.

Long., 6-7, *Lat.*, 2·50 *mill.*

A prettily-banded, smoothly-ribbed, stout little species, of which we have five specimens. Whorls six to seven, turreted, perfectly smooth. Mouth oblong, outer lip and columella denticulate within. (*Signum*, a standard).

M. (Glyphostoma) chrysolitha sp. nov. (Pl. IX., fig. 25).

M. testa breviter fusiformi, albida, delicatula, anfractibus septem (fortasse, apicalibus absentibus), quorum duobus unicoloribus albis, omnibus longitudinaliter costulatis, et spiraliter clathratis, junctura flavo-gemmulatis, gemmis tuberculosis, nitidis, bino ordine in antepœnultimo, trino in pœnultimo, in anfractu ultimo trino ad peripheriam ordine albido sequente, posthac duobus flavis ordinibus, apud basim parvis tuberculis, apertura oblonga, sinu suturali lato, parum labrum effodiente, labro multum extus incrassato, intus sex denticulato, columellari margine plano.

Long., 5, *Lat.*, 2 *mill.*

A very pretty species, with much similarity of marking and texture to *Clathurella granicostata* Reeve, but the mouth is that of a *Glyphostoma* or *Mangilia*. It is shortly fusiform, white, delicate, whorls probably seven, of which the two highest after the apical are plain and uncoloured, the remainder showing regular spiral rows of yellow gemmæ at the junction of the longitudinal costæ with the transverse liræ. There are two rows of these in the antepenultimate, three in the penultimate, and in the last, three above the periphery, where follows one row of spiral colourless gemmæ, then two rows of yellow, the base of the canal being tubercled and colourless. The mouth is oblong,

the sinus wide but not deeply cut, the outer lip much thickened, within six-denticled, columellar margin simple. Very rare. (The derivation of the specific name is the Latin *chrysolithus* from the golden-yellow gemmæ).

M. (Glyphostoma) dialitha sp. nov. (Pl. IX., fig. 26).

M. testa turrita, elongata, ad apicem attenuata, nitida, albescente, ad basim, atque ad suturas, ochraceo tincta, anfractibus octo, duobus apicalibus lævibus, cæteris tumidulis, ad suturas impressis, supernis binis spiraliter gemmularum ordinibus, pænultimo et ultimo anfractu trinis succinctis, gemmulis magnis, conspicuis, ultimo apud basim productam tuberculatis, apertura oblonga, labro extus corrugato, intus obscurè denticulato, margine columellari trinis denticulis munito, sinu lato, sed non profundo.

Long., 5, *Lat.* 1·50 *mill.*

A pretty, small, elongate species, shining white, turreted, eight whorled, with impressed sutures, which are stained with pale ochreous colour, as is a transverse band at the base, the whorls are furnished, the upper with two, the lower with three spiral rows of large unduliferous gemmæ, white, shining, mouth oblong, outer lip wrinkled without, obscurely denticulate within, sinus wide, but not deep, and extending to the outer surface of the peristome. (διάλιθος, decked with gems).

M. (Glyphostoma) latirella sp. nov. (Pl. IX., fig. 27).

M. testa parva, fusiformi, turrita, anfractibus sex vel septem, uno vel duobus apicalibus, bullatis, crystallinis, cæteris anguliferis, ventricosis, ad suturas impressis, longitudinaliter paucicostatis, costis latis, angulatis, irregularibus, spiraliter crassiliratis, liris albis, interstitiis ochraceo-coloratis, ultimo anfractu ad basim attenuato, paullum producto, simili modo decorato, ad medium interstitiali sulco fulviore-ochraceo, apertura angusta, sinuosa, sinu amplo, labrum effodiente, labro extus ad basim paullum incrassato, intus tridenticulato, denticulis fulvis, columella tridenticulata, cum dente suturali simili modo fulvescente.

Long., 4·50, *Lat.*, 1·50 *mill.*

A very delicate species. At first we imagined it to be the juvenile of *Latirus turritus* Rve., but the mouth and processes are those of a true *Glyphostoma*. The apical whorls are glassy, shining, the rest impressed at the sutures, and very coarsely costate, also roughly lirate, the liræ being white, the interstices fulvous. The mouth is narrow, sinus ample and profound; the denticles of the outer lip, of the columella, and the sutural tooth are all tinged fulvous red. A few specimens. From the description of *Gl. Gaidei* Hervier, J. de Conch., vol. 43, p. 239, it must resemble this shell. There, however, are eight whorls, but little decussation, and other points of distinction. (*Latirella* resembling *Latirus turritus*).

M. (Glyphostoma) notopyrrha sp. nov. (Pl. IX., fig. 28).

G. testa parva, turrita, fusiformi, candida, solida, anfractibus septem, ventricosis, apud suturas compressis, longitudinaliter crassicostatis, transversimque pauciliratis, liris regularibus, conspicuis, ultimo anfractu infrá suturas dorsaliter squarrosé brunneo-maculato, apertura angusta, labro exteriore multum incrassato, intus denticulis magnis instructo, columella denticulata.

Long., 5, *Lat.*, 2 *mill.*

Many specimens of a pure-white turreted little species, with a conspicuous dorsal squarrose brown spot just below the suture of the last whorl. The whorls are ventricose and ribbed longitudinally, crossed with a few conspicuous liræ, the outer lip is much thickened with large denticles on the inner surface, and the columella is toothed. (νῶτος the back, πυρρός rufous).

M. (Glyphostoma) rhodacme sp. nov. (Pl. IX., fig. 29).

M. testa fusiformi, delicatula, albida, anfractibus septem, ventricosis, apud suturas impressis, duobus apicalibus puniceis, lævissimis, simplicibus, cæteris longitudinaliter costatis, costis perpaucis, transversim spiraliter crassiliratis, apertura sinuata, sinu amplo, labrum effodiente, labro extus incrassato, intus quadri-denticulato, columella obscuré septem-denticulata.

Long., 7, *Lat.*, 2·50 *mill.*

A delicate white, thickly ribbed, and coarsely transversely lirate species, pure white, with pink tip. Sinus broad and scooped out of the incrassate outer lip, which is four-denticled within, the columella being weakly denticulate also. (ῥόδον, rose; ἄκμη, point).

M. (Glyphostoma) thalera sp. nov. (Pl. X., fig. 30).

M. testa elongata, fusiformi, albida, solidula, anfractibus quinque, obliqué angulatis, et longitudinaliter pauci-costatis, transversim spissi-liratis, liris indistinctis, ultimo anfractu producto, infra suturas irregulariter transversim rufo-punctato (penultimo interdum simili modo decorato), apertura angusta, labro multum incrassato, rufo-tincto, intus multi-denticulato, columella multis denticulis munita, sinu obliquo, amplo, labrum effodiente.

Long., 7, *Lat.*, 2 *mill.*

This would seem variable both in form and marking. One specimen shows a leaning to *M. paucimaculata* Angas, another is almost marked as *M. theskela* M. & S. It is, however, far removed from this latter species. Rude in contour, five whorled, obliquely angled, coarsely ribbed longitudinally, and closely but indistinctly lirate transversely. In shape, elongate fusiform, mouth oblong. Sinus ample and deep, outer lip much incrassate, both it and the columella are many denticled, outer lip but not the columella tinged with fulvous. A few specimens of somewhat varying shape and size. (θάλερος blooming, genial).

M. (Glyphostoma) theoteles sp. nov. (Pl. X., fig. 31).

G. testa ovato-pyramidata, minuta, anfractibus quinque, supernis albescentibus, subnitidis, tumidis, transversim papillosis, papillis grandibus, in penultimo anfractu bino ordine, papillarum, quorum inferiore maximo, ultimo præcipue bino ordine, ad suturas magno, conspicuo, interstitiis læté ochraceis, hos quatuor ordines accingentibus, cætera superficie alba unicolore, apertura angusta, ad sinum angulata, sinu profundo, labrum exterius effodiente, labro extus multum incrassato, intus quadri-denticulato, columella simili modo quadri-denticulato.

Long., 3·50, *Lat.*, 1·75 *mill.*

Very small, and with some slight resemblance to *M. thepalea*. The nodulous papillæ are, however, much larger in proportion to the size of the shell, and, in consequence, fewer. The upper whorls are closely tubercled, shining white. The four rows—two on the penultimate, two on the last whorl—are approximate, and the space contained by them is banded with ochre, the white shining nodules standing out more prominently. The mouth is narrow, oblong, sinus deep, outer lip much thickened, four toothed within as is the columellar margin. Rare; we have seen very few examples. (θεοτέλης divinely perfect).

M. (**Glyphostoma**) **thepalea** sp. nov. (Pl. X., fig. 32).

M. testa parva, pyramidato-fusiformi, albescente, delicatula, anfractibus septem, quorum apicalibus vitreis, cæteris (quinque) ventricosulis, longitudinaliter noduloso-costatis, costis in medium transversim unisulcatis, interstitiis longitudinaliter tenuissimé striolatis, infraque suturas simul ac apud medium anfractus ultimi pallidé ochraceo-cinctis, in uno specimine costis hic illic ad medium usque ad suturas utrinque ochraceo-punctatis, in altero tribus supernis (apicalibus exceptis) unicoloribus, nodulis papillaribus semper albis, haud ochraceo-tinctis. Apertura oblonga, sinu suturali, obliquo, labro exteriore incrassato, intus conspicué septemdenticulato, columella denticulis minoribus sex vel septem munita.

Long., 5·50, *Lat.*, 2 *mill.*

A very delicate, beautiful little shell. It is pyramidally spindle-shaped, white, with seven whorls, two being glassy and apical, the rest ventricose, impressed at the sutures, the longitudinal ribs are nodulous, shining, and very regular, one spiral sulcation crosses each rib in the middle, the interstices between are beautifully longitudinally striolate. At the sutures, and in the middle of the last whorl (in some specimens also on the upper whorls), there is a very pale ochraceous banding, the nodules of the ribs still retaining their white lustre. In other specimens the first three or four whorls remain quite colourless. The mouth is oblong, sinus sutural, obliquely extending over the

outer lip, which is much incrassate within with seven prominent denticles, these being provided with three also of lesser size. The species comes near *Glyphostoma disconicum* Hervier (J. de Conch., vol. 43, p. 48, published June, 1896), as regards the transverse sulcus, but in many respects—*eg.* the mouth denticles —it differs widely, so far as can be told by description alone, without a figure. Several specimens. (*θηπάλεος*, wonderful, astonishing).

M. (Glyphostoma) thereganum sp. nov. (Pl. X., fig. 33).

G. testa oblongo-fusiformi, omnino pallidè ochracea, gradatulo-turrita, apud suturas multum impressa, anfractibus septem, quorum duobus apicalibus puniceis, lævibus, cæteris juxta suturas angulatis, longitudinaliter costulatis, costis incrassatis, transversim liratis, liris superioribus paucis, has inter duabus minoribus intercingendis, ultimo anfractu apud basim tuberculifero, canali recurvo, sinu labrum exterius effodiente, profundo, apertura oblongo-sinuosa, labro extus percrasso, bino nodularum ordine longitudinaliter decorato, intus septem vel octo-denticulato, margine columellari simplice.

Long., 9, *Lat.*, 2·75 *mill.*

A conspicuous well-marked shell, though wholly plain ochraceous, unredeemed by any particular marking. It is fusiform, turreted, much impressed at the sutures, seven whorled, the two apical being stained with pink, the lower whorls are angled at the sutures above, regularly longitudinally ribbed, the ribs rather thick, and transversely spirally lirate, one large lira in the proportion of 2 : 1, the two smaller intervening; the last whorl is tubercled at the base. Mouth sinuous oblong. Sinus deep, outer lip very thick with double fimbriate row of nodules without, and within seven or eight denticulate, the columellar margin being simple. Very rare, two specimens only. (*θερήγανον*, the wicker-basket of a cart, from the latticed appearance).

M. (Glyphostoma) thesaurista sp. nov. (Pl. X., fig. 34).

M. testa parva, fusiformi, attenuata, albida, solidiuscula, anfractibus decem (?) ad suturas impressis, ochraceo-cinctis,

longitudinaliter parvicostatis, costis inconspicuis liriformibus, liris spiralibus distantibus clathratis, ultimo anfractu apud medium cingulo ochraceo spiraliter decorato, apertura ovato-sinuosa, sinu cochleari, effuso, amplo, labro extus perincrassato, expanso, intus quinque denticulato, columella minutè denticulata.

Long., 6·50, *Lat.*, 2·25 *mill.*

A handsome fusiform shell, whorls probably ten, the apical being absent in our specimens, whorls slightly angled and ventricose, ribs and transverse liræ of about equal size, the former being small and feeble; at the sutures and round the middle of the last whorl are ochre bands. Outer lip much thickened and expanded, sinus spoon-shaped, wide and broad, outer lip finely denticled within, columella also denticulate. (θήσαυρος, treasure).

M. (Glyphostoma) thyridota sp. nov. (Pl. X., fig. 35).

G. testa brevi, pyramidata, unicolore, albida, anfractibus sex, turritis, ventricosis, apud suturas angulatis, longitudinaliter conspicuè crassicostatis, transversim pauciliratis, apud medium anfractuum uno ordine profundo fovearum instructis, in ultimo bino simili ordine, apertura angusta, obliqua, labro extus multum incrassato, intus quadri-denticulato, columella minutissime denticulata, sinu profundè in labro exteriore effuso.

Long., 4·50, *Lat.* 2 *mill.*

A pure white, curtly pyramidal species, the surface not shining. Whorls six, turreted, angled at the suture, ventricose, longitudinally thickly ribbed, transversely ornamented with few lirations. In the middle of the upper whorl and doubly-ranked in the last whorl, are transverse regular deep pittings, squarrose, profound, between the ribs, which suggest the trivial name. The mouth is narrowly oblique, outer lip thickened, furnished with four strong denticles, the columellar teeth are more obscure and feeble. Only one specimen, and that slightly worn; but the characters are so remarkable as to excuse description from such scanty material. (θυρίδωτος, furnished with windows or doors.)

Clathurella caletria sp. nov. (Pl. X., fig. 36).

C. testa gracili, fusiformi, delicata, alba, ad suturas pallidissimé ochracea, anfractibus septem, quorum duobus apicalibus, mamillatis, lævissimis, cæteris gradatulo-turritis, arcté longitudinaliter gracili-costulatis, costis delicatis, elevatis, rectis, spiraliter regulariter clathrato-liratis, junctura costarum lirarumque nitidé gemmulatis, ultimo anfractu zona indistincta pallidissimé ochracea apud medium, apertura oblongo-sinuosa, labro extus crenulato, intus simplice, sinu lato, labrum exfodiente, latere dorsali suturali callo crassiusculo, nitido, lacté ochraceo, margine columellari versus basim minuti-denticulato, canali paullum producto.

Long., 4·50 *mill.* *Lat.*, 1·50 *mill.*

A very beautiful and delicate species, whorls seven, turreted, two being apical, finely and regularly clathrate; the mouth is sinuously-oblong, outer lip simple within, columellar margin minutely toothed towards the base, canal a little produced, a very pale ochraceous band round the middle of the last whorl, as at the sutures. The sinus is deeply cut behind, at the sutural margin of the outer lip is a bright ochraceous thickened callus. Only one specimen. (κάλος beautiful, ἠτριος woven).

C. cnephæa sp. nov. (Pl. X., fig. 37).

C. testa breviter fusiformi, corrugata, solidiuscula, omnino nigro brunnea, anfractibus sex vel septem, paullum ventricosulis, longitudinaliter crassicostatis, et spiraliter costulatis, costis crassiusculis, paucis, apertura oblonga, labro exteriore intus quadri-denticulato, margine columellari recto, simplice, sinu superficiali.

Long., 4·75, *Lat.* 1·50 *mill.*

A completely unicolorous species, being either pale or dark blackish-brown, the latter predominating in the specimens before us in proportion of 5 : 2. A typical *Clathurella*, with squarely crossed costæ, both longitudinal and transverse of equal thickness, not many in number, say thirteen on last whorl, crossed by eleven, of which two spiral liræ below the suture are

approximate. The outer lip is denticulate within, sinus not extending beyond the middle of the outer lip. A considerable number of specimens. (κνεφαῖος, dusky brown, from the colour).

Clathurella episema sp. nov. (Pl. X., fig. 38).

C. testa fusiformi, concinna, pallidé ochracea, anfractibus quinque (exclusis apicalibus), distanter costulatis, spiraliter crassiliratis, liris et costis albo-ochreis, interstitiis plus minusve ochraceo-fulvis, ultimo anfractu apud basim albescente, liris tuberculatis, apertura oblonga, labro extus incrassato, intus sex denticulato, margine columellari recto, simplice, sinu amplo, profundo.

Long., 4·50, *Lat.*, 1·25 *mill.*

A neat little species, with the usual fusiform shape, and five whorls, exclusive of the apical, not present in our specimens. The whorls are clathrate, with longitudinal ribs and spiral liræ, these being pale ochreous-white, the interstices darker ochreous. The last whorl is slightly prolonged and sculptured in the same way as the upper whorls ; one or two of the longitudinal ribs seem thicker than the others, giving a very slightly varicose appearance. The columellar margin is straight, simple, six denticled, outer lip incrassate, six denticled within, sinus deep and large. (ἐπίσημος remarkable).

C. lita sp. nov. (Pl. X., fig. 39).

C. testa fusiformi, parva, ochraceo-brunnea, delicatula, anfractibus sex, quorum duobus apicalibus, tumidis, nitidis, cæteris ventricosis, obtusé crassicostatis, longitudinaliter, et spiraliter pluriliratis, interstitiis planatis, apertura laté ovata, intus brunnea, labro exteriore paullum incrassato, albescente, sinu parvo, rotundato, margine columellari simplice.

Long., 4, *Lat.*, 1·50 *mill.*

A small plain shell of simple character, not very dissimilar to some of our European species. The whorls are six; the lower ones ventricose, the two apical swollen, smooth and shining. Obtuse and thick ribs, longitudinally, ornament the shell, and these are spirally crossed by many conspicuous liræ. The aperture is widely ovate, outer lip slightly thickened, whitish ;

the mouth is brown within, columellar margin plain. Likewise the sinus on the outer lip is inconspicuous, small and rounded. Three specimens. (λῖτος, plain, simple.)

C. longa sp. nov. (Pl. X., fig. 40).

C. testa attenuata, prolongata, solidula, brunnea, anfractibus novem vel decem, ventricosulis, ad suturas impressis, longitudinaliter crassicostatis, costis paucis, spiraliter bi- vel trifilostriatis, ultimo anfractu medio usque ad basim filo-striato, striis duodecim vel tredecim accingentibus, apertura triangulari, sinu extenso, canali brevi, labro exteriore crassiusculo.

Long., 5 *mill.*, *Lat.*, 1·50 *mill.*

A small brown attenuate shell, being long in proportion to its width, of the same facies as the Australian *C. Letourneuxiana* Crosse, but smaller, more approaching in this respect *C. incrusta* of Tenison Woods, from Tasmania, the whorls are (probably) nine or ten, but all our many specimens are worn at the apex. The whorls are ventricose, longitudinally few and thick ribbed, impressed at the sutures, crossed spirally with few (three or four) spiral lines, which, at the junction with the longitudinal ribs are pale and shining. The last whorl has altogether twelve or thirteen such spiral revolving lines. The canal is short, aperture triangular, this appearance caused by the wideness of the sinus. The outer lip is incrassate, as in most of this section. The specimen in most perfect condition, which is therefore taken as the type, is not so attenuately long as some others.

C. Rogersi sp. nov. (Pl. X., fig. 41).

C. testa oblongo-fusiformi, colore valde variabili, nunc pulchrè pallide rosea, nunc ochracea unicolore, nunc spiraliter brunnea multivittata, anfractibus sex, apicali rubro-coccineo vel fulvo-ochraceo, vitreo, cæteris angulato-costatis, undique spiraliter liratis, liris majoribus ad angulos costarum, suturis impressis, apertura oblonga, labro simplice, sinu perinconspicuo, sæpius absente.

Long., 4·50 *mill.* *Lat.*, 1·50 *mill.*

The prevailing form of this pretty little shell is the rose-pink, though there are many of the striped, and of the plain ochreous form in our collection; we do not think it the young of any species, although the characters about the outer lip are not very defined. We have seen many specimens, all alike in sculpture, but are not quite certain yet of its genus. From the figure, it may be one of Duclos' lost species, *e.g.*, *C. cledonida*, placed as *Columbella*, but its affinities are distinctly Pleurotomoid. We have much pleasure in recognizing the many kind services extended to us by Mr. Thomas Rogers, of Manchester, in the naming of this species.

Clathurella spyridula sp. nov. (Pl. X., fig. 42).

C. testa minuta, delicatula, attenuata, angusta, albida, nitida, anfractibus sex, quorum duobus apicalibus simplicibus, cæteris clathratis et cancellatis, liris acutis, costis incrassatis, liris, junctura costarum, gemmulatis, apertura sinuosa, sinu effuso, lato, labro extus crasso, intus minuté octo denticulato, columella recta, simplice.

Long, 4, *Lat.*, 1 *mill.*

Very minute, narrow, white, latticed, and cancellate, the junctions of these cancellated liræ being gemmuled; the whorls are six, two being apical; mouth sinuous, canal very short, outer lip minutely denticulate, columella straight, and of simple character; we cannot find that its exact counterpart has been described. (*spyridula* dimin. from σπύρις a basket).

Daphnella terina sp. nov. (Pl. X., fig. 43).

D. testa fusiformi, delicata, albida, anfractibus sex, supra turritis, undique tenuistriatis, sub lente, omnibus præter ultimum anfractum et apicalem indistincte longitudinaliter costuliferis, ultimo infra suturas brunneo-maculato, brunneisque flammis dorsaliter ad basim decorato, apertura angusté obliqua, labro simplice, sinu parvo.

Long. 5, *Lat.* 2·50 *mill.*

Has some affinity with the large *D. lymnæiformis* and also *D. metcalfiana* Reeve, but is a smaller, shorter, and more deli-

cate species, and the upper whorls are white, turreted, and indistinctly ribbed. Two specimens. (τέρεινος tender).

D. thespesia sp. nov. (Pl. X., fig. 44).

D. testa delicatula, turrita, fusiformi, albida, anfractibus septem vel octo, squarrosé ventricosis, tribus apicalibus brunneis, subvitreis, cæteris albidis, arcté decussatis, costis longitudinalibus obliquis, liris transversis minuté gemmulatis, suprá lineola una ochracea cingulatis, et, in duobus speciminibus, ad suturas, ultimo anfractu variipicto, in uno specimine infrá, juxta suturas squarrosé ochraceo-punctato, et tribus ordinibus bilineatis cincto, in alio unilineatis, in alio lineis obsoletis, omnibus speciminibus dorsaliter ochraceo-maculatis, apertura oblonga, sinu lato sed non profundo, peristomate incrassato, suturaliter expanso, intus arcté denticulato.

Long., 6, *Lat.*, 2·50 *mill.*

A beautiful species, by the description and figure allied to *D. varicosa* Sow. from the same region. There are, however, no signs of varices. The shell is pure delicate white, with seven or eight whorls, of which three are apical and vitreous brown, the remainder finely decussate; where the spiral lines cross the oblique riblets a gemmuliferous appearance is presented. The whorls are squarely ventricose, impressed at the sutures. The coloration consists in orange-brown lines, different in number in every specimen. Some specimens are almost plain, others have a row of square brown spots just below the suture on the last whorl. The mouth is oblong, outer lip incrassate, suturally expanded, finely denticulate within, and the sinus is broad, but not deep. This species seems to approach the border land between *Daphnella* and *Clathurella*. Seven or eight specimens. (θεσπέσιος, divine, is aptly applied to this exquisite form).

Mitra (Costellaria) Dorotheæ sp. nov. (Pl. X., fig. 45).

M. testa fusiformi, pallidissimé ochracea, spira acuminata, anfractibus octo, apicali simplice, lævi, cæteris ventricosulis, longitudinaliter crebricostatis, spiraliter arcté liratis, liris

costas contingentibus, ultimo anfractu superné juxta suturas rotundo-angulato, anticé attenuato, costis rectis, apertura angusta, labro simplice, intus striato, columella quadriplicata, plica superiore magna.

Long., 19, *Lat.*, 6 *mill.*

A critical species, which we have known for a long time, but never been able to diagnose with certainty. Its nearest affinities lie with *M. angulosa* Küster, a much more attenuate species, larger in all its parts ; *M. Antonelli* Dohrn, differing in colour and the clear shining ribs, not covered by the spiral liration ; *M. fusiformis* Kien. more closely ribbed and sharply angled, with different coloration ; *M. salmonea* Dohrn, perhaps the nearest approach, but differing in colour and texture ; and *M. compta* Reeve, but this last is not so easily comparable. It is a pretty shell, as are all the *Costellariæ*, palest ochre in hue, turreted, whorls eight, ventricose, angled below the suture and with straight longitudinal ribs crossed with frequent liræ. Mouth thick within, lip simple. A very few specimens. There is an individual in J.C.M.'s collection from Mauritius.

Bittium æolomitres sp. nov. (Pl. X., fig. 46).

B. testa minutissima, cylindracea, pupæformi, compacta, anfractibus octo, duobus apicalibus, cæteris bino gemmarum ordine spiraliter accinctis, in penultimo et antepenultimo anfractu gemmulis permagnis, nitidissimis, ultimo anfractu tribus similibus ordinibus decorato, apertura trigona, peristomate tenui, canali brevi.

Long., 2·25, *Lat.*, 1·25 *mill.*

A very small species. Pupiform, with eight whorls, adorned with two rows of papilliform gemmæ, those in the two whorls before the last being the largest, the last whorl having three rows of gemmules. The coloration is vivid. Apical whorls fulvous brown, the two next ochreous, then a darker brown hue, the penultimate being slightly lighter, the last whorl pale ochreous above, towards the base darker brown. (ἀιολομίτρης, with glancing or glittering girdles.)

B. albocinctum sp. nov. (Pl. X., fig. 47).

B. testa minuta, cylindrica, ad apicem attenuata, apice obtuso, anfractibus octo, tribus gemmularum ordinibus seriatim dispositis, uno ordine infra, juxta suturas, albido, duobus pallidé ochraceis, ultimo anfractu albido, bicingulato, apertura ovata, labro simplice, canali brevi.

Long., 4, *Lat.*, 1·75 *mill.*

A very pretty species, of which we have seen two or three specimens. Much resembling in sculpture *B. uveanum*, but differing in the mouth being larger, the shell less tun-shaped, and in the coloration. These two *Bittia* belong to the same section of the genus as *B. pulvis* Issel (described by the author a sa *Cerithiopsis*), and *B. tenthrenoïs* Melv., described in Proc. Mal. Soc., 1896, vol. 2, No. 3, p. 109, from Bombay.

B. marileutes sp. nov. (Pl. X., fig. 48).

B. testa minuta, cylindracea, nigro-brunnea, condensata, apud apicem obtusata, anfractibus octo, duobus apicalibus, cæteris transversim papilliferis triseriatis, papillis gemmulatis nitidis, regularibus, apertura rotunda, labro simplice.

Long., 2·50, *Lat.*, 1 *mill.*

One of the smallest if not the most minute of the genus. An almost pitchy-black little species, with eight close-grained whorls; the whorls are adorned with three transverse rows of papilliform gemmæ, black, shining. Mouth simple, very small. Three specimens. (μαριλέυτης, a charcoal burner, from the colour).

B. uveanum sp. nov. (Pl. X., fig. 49).

B. testa minutissima, dolioliformi, nitida, violacea, in specimine juniori apicalibus quinque albidis, quam maximé attenuatis, anfractibus novem, apud suturas impressis, tribus spiralium gemmularum ordinibus regulariter accinctis, gemmulis nitidis, nodulosis, interstitiis planatis, ad basim infrá, simul ac ad apicem suprá, multum attenuatis, apertura parva, ovata, labro simplice, canali brevissimo.

Long., 3·25, *Lat.*, 1·25 *mill.*

Four or five specimens of a very small *Bittium*, pale violet in colour, one of them being a young shell, brownish in coloration, and exhibiting five perfect apical whorls, bright white in hue and extremely small and attenuated. The shell is tun-shaped, much attenuate at both ends, the mouth is very small, and the whorls are ornamented with three regular rows of nodular gemmæ, the interstices being plain.

Cerithiopsis aurantiaca sp. nov. (Pl. X., fig. 50).

C. testa longa, attenuata, subpellucida, læté aurantiaca, anfractibus duodecim (apicalibus?), apud suturas impressis et crenellatis, spiraliter tricarinatis, ultimo quadricarinato, carinis pulchré crenellatis, longitudinaliter elevato-liratis, liris rectis, interstitiis quadratis, alveolatis, nitidis, apertura ovato-quadrata, labro simplice, basi nitida, planata.

Long., 4 *mill.* (*approx.*), *Lat.*, 1·25 *mill.*

A very delicate, semi-transparent orange-coloured minute form, long, attenuate, with angled whorls, crenulate, and impressed at the sutures. In number the whorls are twelve (approximately speaking, for our specimens are not perfect at the apex). Three carinæ adorn the upper whorls, four the lowest one; quadrately interlaced with longitudinal liræ placed equi-distantly. Mouth ovato-quadrate, lip simple, base flattened, shining. Three specimens only.

C. catenaria sp. nov. (Pl. X., fig. 51).

C. testa parva, fusiformi, uniformi, ochraceo-brunnea, anfractibus duodecim, quorum duobus apicalibus, vitreis, cæteris ventricosulis, apud suturas impressis, tribus regularibus gemmularum catenis spiraliter decoratis, et longitudinaliter parviliratis, interstitiis alveolatis, simul ac ad suturas, apertura subquadrata, labro simplice, canali brevi.

Long., 6·15, *Lat.*, 1·75 *mill.*

An elegant little species, fusiform, ochraceous-brown, with twelve whorls, two being apical, and glossy pale-brown, the rest ventricose, impressed at the sutures, longitudinally lirate, liræ small and transversely crossed by three chains of

gemmæ, the interstices are somewhat alveolate in appearance, the aperture square, lip simple, canal short. A few specimens, not differing from each other. (*catena*, a chain).

C. eutrapela sp. nov. (Pl. X., fig. 52).

C. testa perlonga, cylindrica, gradatim attenuata, albocinerea, delicatula, anfractibus quatuordecim, apicalibus tribus, simplicibus, haud nitentibus, carneo-cinereis, cæteris elegantissimis, ad suturas quasi-canaliculatis, pallide ochraceo-tinctis, tricarinatis, carinis subvitreis papilloso-gemmatis, undique longitudinaliter liratis, ultimo anfractu quadricarinato, ad basim planato, paullum excavato, apertura quadrato-ovata, labro simplice.

Long., 7·50, *Lat.*, 1·50 *mill.*

A very elegantly chased, glassy species, cylindrical, fourteen whorled, the apical whorls being dark, cinereous, but smooth, the sculpture is such as is usual in this genus, thrice keeled whorls, the keels gemmulate at their junction with the longitudinal connecting liræ, last whorl four keeled, mouth quadrato-ovate, base somewhat excavate, smooth, shining. Three or four specimens. (εὐτραπελος elegantly formed).

C. Fosteræ sp. nov. (Pl. X., fig. 53).

C. testa gracillima, multum attenuata, delicatula, perpulchra, anfractibus quatuordecim, quorum tribus apicalibus, lævibus, ochraceo-brunneis, cæteris angulato-ventricosis, apud suturas canaliculatis, et ochraceo-zonatis, in medium anfractuum albescentibus, suprá plus minusve violaceo-tinctis, duobus costis spiraliter conspicuè accinctis, regularibus, gemmulatis, interstitiis interdum, præcipue ad suturas, alveolatis, apertura subrotunda, peristomate tenui, marginem apud columellarem triangulatim expanso, canali brevi.

Long., 6, *Lat.*, 1 *mill.*

A most exquisite shell, extremely graceful and attenuate, with fourteen whorls, of which three are apical, pale-brown and smooth, the rest ventricose, slopingly angled, canaliculate at the sutures, and also banded at the junction of the whorls with ochraceous-brown, while the median portion is white, the

first seven or eight whorls being tinged with violet; each whorl is spirally crossed by two prominent revolving ribs, these ribs gemmulate at the junction with the longitudinal striæ, the interstices between being sometimes honeycombed in appearance especially at the sutures. The mouth is roundish, lip simple, and triangularly expanded towards the columellar margin, canal short. Eight or more specimens; and named, in honour of Mrs. Emma Hadfield, *née* Foster, as a small token of appreciation and esteem.

Cerithiopsis hedista sp. nov. (Pl. X., fig. 54).

C. testa angusta, cylindrica, attenuata, gracili, anfractibus duodecim, quorum apicalibus quatuor, pervitreis, lævissimis, cæteris spiraliter regularibus tribus gemmularum ordinibus decoratis, gemmulis papillatis, nitidis, his ordinibus varié coloratis, in uno specimine primo et medio albato, tertio ochraceo, in altero primo ochraceo, secundo et tertio albatis, ultimo anfractu ad basim bicarinato, apertura quadrato-ovata, labro brunneo-ochraceo, canali brevissimo.

Long., 5, *Lat.*, 1·50 *mill.*

A prettily variously-banded delicate cylindrical shell, the whorls ornamented with three rows of transverse gemmules, shining, papillary, these rows being coloured white and pale ochraceous-brown, sometimes two white rows together, followed by a brown row, and occasionally the obverse. The last whorl is furnished with two keels towards the base; the lip is ochraceous-brown, and the canal very short. (ἡδιστος, most delightful).

C. adelpha sp. nov. (Pl. X., fig. 55).

C. testa attenuato-fusiformi, brunneo-nigra, regulari, subulata, anfractibus undecim, quorum duobus apicalibus, minutissimé punctatis, pallide brunneo-ochraceis, cæteris transversim papilloso-gemmulatis, gemmulis rotundis, nitidis, similibus, tribus ordinibus succinctis, ultimo anfractu non producto, ad peripheriam acutangulato, basi planulata, apertura quadrato-ovata, labro squarrosulo, tenui, simplice.

Long., 4, *Lat.*, 1 *mill.*

A dark-brown very attenuate *Cerithiopsis*, much resembling certain forms of European species, *e.g. C. diadema* Watson, but this latter is a larger shell. The arrangement of pattern is the same, viz., three rows of papilliform gemmules, round, brown, shining. Several specimens. (ἄδελφος akin).

Turbonilla belonis sp. nov. (Pl. X., fig. 56).

M. testa perlonga, attenuata, crystallina, albida, anfractibus duodecim, ventricosis, gradatulis, paullum suprá subdistortis, undique longitudinaliter recticostulatis, interstitiis indistinctè striatis, ultimo anfractu ad peripheriam fortiter spiraliter unicostato, hac costa basim circumcingente, apertura rotunda, labro circiter incrassato, intus ad labrum exterius quadridenticulato, columella suprá simplice.

Long., 8·50, *Lat.*, 2 *mill.*

A highly interesting shell, which it was at first difficult to assign to any special genus. It is very long, attenuate, twelve whorled, crystalline, the whorls all ventricosely gradate and impressed at the sutures, longitudinally costate, the ribs being straight, at the periphery of the last whorl these ribs end in a strong transverse rib-process, which encircles the base. The mouth is round, lip thickened, and in the inner margin of the outer lip are four denticles which extend slightly within the orifice. The columellar margin is, so far as can be seen, simple. Undoubtedly a *Turbonilla*; *T. decussata* Pease has the denticled mouth, but there is no transverse ridge at the base of the last whorl in that species. (βελονὶς, a small needle).

Pyrgulina gliriella sp. nov. (Pl. X., fig. 57).

P. testa ovata, obtusa, livido-punicea, glandiformi, anfractibus sex, apicali punicco, retorto, subvitreo, cæteris longitudinaliter densicostatis, interstitiis lævibus, apertura ovata, peristomate continuo, margine columellari fortiter uniplicato.

Long., 2·25 *mill. sp. min.*, 3·50 *mill. sp. max.*, *Lat.*, 1 *mill. sp. min.*, 1·50 *mill. sp. max.*

Extremely minute. Shell oval, obtuse, livid pink grey, in facies much like *Zafra pupoidea* Ad. in miniature. The last whorl, at the apex of the smallest specimen, is twisted over the next, as is the habit of most of the *Odostomiæ*. The other whorls are longitudinally densely ribbed, the interstices between being smooth. The mouth is ovate, peristome continuous, columellar margin with a strong single plait or fold. A few specimens. (dim. of *glis*, a dormouse).

Syrnola jaculum sp. nov. (Pl. XI., fig. 58).

S. testa acuta, attenuata, tenui, vitrea, anfractibus undecim, omnibus applanatis, in uno specimine quinque anfractibus superioribus pallidè apud medium brunneo-liratis, in cæteris omnino unicoloribus, apertura attenuata obliqua, labro tenui, columella uniplicata.

Long., 8, *Lat.* 2 *mill.*

Seven specimens of a pure white shining crystalline *Syrnola*, eleven whorled, whorls straight, very slightly channelled at the sutures, in one specimen only the five higher whorls, next to the apical, are delicately spirally twice zoned with narrow ochraceous brown lines, these becoming obsolete in the lower whorls. The other specimens have no trace of such banding. The whorls are perfectly smooth; mouth oblique; lip simple; columella once plaited. (*Jaculum*, a dart, from the pointed contour).

S. violacea sp. nov. (Pl. XI., fig. 59).

S. testa attenuata, lævi, nitida, duobus anfractibus apicalibus diaphanis, cæteris violaceis, unicoloribus, lævissimis, infrá suturas internam ob plicam transversim quasi unilineolatis, ultimo anfractu ad basim pallescente, apertura obliqua, labro simplice, columella uniplicata.

Long., 11, *Lat.*, 2·50 *mill.*

A smooth violaceous shell, ten whorled, quite plain excepting for the line of the revolving plica showing through each whorl transversely just below the sutures; mouth somewhat oblique, outer lip plain, columellar one-plaited. Three specimens, but only one in first-class condition.

Alaba zadela sp. nov. (Pl. XI., fig. 71).

A. testa perlonga, attenuata albo-cinerea, nitente, gracili, anfractibus circa decem, hic illic varicosis, varicibus tumidulis, feré lævibus, undique spiraliter arcté liratis, liris minuté brunneo-punctatis, ultimo anfractu paullum prolongato, apertura ovata, labro tenui.

Long., 5, *Lat.*, 1·50 *mill.*

A small elongate shining ashy-white shell, whorls probably ten, but our specimen is broken at the apex, swollen varices are scattered over the whorls, and spiral liræ uniformly cover them, with here and there bare patches where the varices come. These liræ are minutely brown dotted. Mouth ovate, lip simple. (ζάδηλος manifest).

Litiopa limnophysa sp. nov. (Pl. XI., fig. 72).

L. testa ovato-oblonga, rapidé attenuata versus apicem, tenuissima, rufocinerea, anfractibus septem, quorum tribus minimis nigrescentibus, apicalibus, cæteris tenuibus, sublævibus, ultimo expanso, sub lente transversim striatulo, infra suturas et apud medium anfractus spiraliter flammis maculisve rufis depicto, apertura oblonga, labro tenuissimo, columella versus basim subtruncata.

Long., 5, *Lat.*, 1·50 *mill.*

Like a *Limnæa* in miniature. Seven whorled, ovate oblong, the last three whorls apical, decussate beneath a lens, and blackish, the rest ashy red, painted on the last whorl, which is very finely transversely striate, with rufous flames and spots. Mouth oblong, lip very thin, columella truncate towards the base. Two specimens only; would appear near *L. nitidula* Pfr.

Alvania pisinna sp. nov. (Pl. XI., fig. 60).

A. testa minutissima, oblonga, albida, concinna, anfractibus sex, quorum duobus apicalibus subvitreis, lævibus, cæteris ventricosis, ad suturas multum impressis, arcté costulis longitudinalibus lirisque spiralibus decussatis, tribus lirarum ordinibus supernis, ultimo anfractu ordinibus quatuor, ad

basim spiraliter unicarinato, apertura rotunda, peristomate incrassato, continuo.

Long., 1, *Lat.*, ·50 *mill.*

Very minute, pure white, whorls six, of which two are apical, much ventricose and impressed at the sutures. The whorls are ornamented with clathrate riblets and liræ, three-ranked spirally in the upper whorls, four in the lowest, with a sharply-turned keel round the base. Aperture round, outer lip continuous, thickened. (*pisinnus*, a small child).

Rissoina baculum-pastoris sp. nov. (Pl. XI., fig. 61).

R. testa prælonga, attenuata, interdum flexa, nitida, candida, anfractibus decem, apicali papillari, cæteris lævibus, ad medium spiraliter acutangulis, ad suturas impressis, ultimo anfractu biangulato, apertura ovata, peristomate incrassato, feré continuo.

Long., 6, *Lat.*, 1·50 *mill.*

Allied, doubtless, to *R. spirata* Sowb., so protean in its forms, but it seems distinct from every variety. It may also be allied to *R. miranda* A. Ad. or *R. insolida* Desh., by some considered only a variety, but there is no sign of the crenulations, so very conspicuous an ornament on the whorls of these two last species. One of our specimens is bent, giving the aspect of a shepherd's staff, hence the trivial name. The shell is white, shining, ten whorled, the whorls smooth, impressed at the sutures, and uniformly spirally once ribbed, the last whorl twice; mouth ovate, peristome almost continuous, thickened. Some slight resemblance in sculpture to species of *Scalenostoma* may be observable.

R. catholica sp. nov. (Pl. XI., fig. 62).

R. testa oblongo-fusiformi, parva, nivea, nitida, apice obtusato, anfractibus sex, apicali simplice, cæteris ventricosulis, longitudinaliter arcté obliquicostatis, interstitiis hic lævibus, illic sub lente tenuissimé striatulis, apertura ovata, paullulum effusa, labro incrassato.

Long., 3, *Lat.*, 1·25 *mill.*

A small white species of simple character. Longitudinally obliquely ribbed, the costæ being many, and with their interstices mostly smooth, but occasionally very finely striate when seen microscopically ; mouth oval, lip rather thickened.

R. enteles sp. nov. (Pl. XI., fig. 63).

R. testa pyramidato-fusiformi, pellucida, albida, nitida, anfractibus septem, minimé tumidulis, spiraliter tenui-sulcatis, sulcis superficialibus, ultimo anfractu infra medium nitidissimo, planato, aliter tenuisulcato, apertura lunata, effusa, labro crassiusculo, planato, simplice.

Long. 6, *Lat.* 2·50 *mill.*

A white pellucid shell, with a milky tinge ; the whorls, seven in number, are finely sulcate, sulcations extremely superficial. There is a space round the body of the last whorl where these sulci are absent, but they are resumed round the base. The mouth is wide, lip somewhat incrassate. (ἐντελής perfect, complete).

R. nesiotes sp. nov. (Pl. XI., fig. 64).

R. testa elongata, turrita, albida, anfractibus novem, quorum duobus apicalibus, vitreis, lævibus, cæteris ventricosulis, pallidé ochraceo-tæniatis, longitudinaliter obliqui-costatis, costis numerosis, lævibus, nitidis, interstitiis sub lente spiraliter tenuissimé striatis, in ultimo anfractu costis ad basim tuberculatis, tuberculorum quinque ordinibus, apertura ovata, labro multum incrassato, intus simplice.

Long., 6, *Lat.*, 1·50 *mill.*

A smooth shell, elongate, obtusely turreted, whorls ventricose, nine in number, two being apical and glassy ; all the whorls are simply obliquely costate longitudinally, the interstices being extremely finely striate. A pale spiral ochreous band surrounds the lower half of the whorls. At the base of the last whorl, the costæ become tuberculated ; there are five spiral rows of these. Mouth ovate, much thickened. Several specimens. N.B.—A form of this species also occurs in

which the ribs are all more or less tubercled; we fancy this may be the more juvenile state of the species. (νησιώτης an islander).

Rissoina (Phosinella) quasillus sp. nov. (Pl. XI., fig. 65).

R. testa fusiformi, candida, versus apicem attenuata, anfractibus decem, quorum apicalibus duobus vitreis, lævissimis, cæteris arcté costulatis, costis rectis, spiraliter lirarum ordinibus accinctis, liris elevatis, ad juncturam costularum gemmulatis, nitidis, apertura rotundo-lunari, labro extus paullulum incrassato, intus simplice.

Long., 4·50, *Lat.*, 2 *mill.*

A very neat rough little white shell, clathrate, gemmuled at the junction of the ribs with the spiral liræ, ten whorled, aperture roundly-lunar, outer lip slightly thickened, simple within. Allied to *R. Deshayesi* Schwartz, from the Philippines. Several specimens. (*Quasillus*, a small work-basket, dim. of *qualus*).

R. sincera sp. nov. (Pl. XI., fig. 66).

R. testa pyramidato-fusiformi, candida, sub-turrita, anfractibus octo (?) apud suturas impressis, tumidulis, superficialiter longitudinaliter costulatis, costis remotis, simul ac liris spiralibus intersectis, quadrato-clathratulis, interstitiis planis, apertura effusa, labro crassiusculo, intus simplice.

Long., 6·50, *Lat.*, 2·50 *mill.*

A shell of bold contour. White, probably eight whorled (but only five remain on our specimens), whorls slightly ventricose, longitudinally superficially costulate, spirally lirated; three rows on the two whorls before the last, on the last whorl there are five rows; the quadrate interstices are plain, non striate, lip effuse, incrassate. Two specimens.

R. zonula sp. nov. (Pl. XI., fig. 67).

R. testa perparva, fusiformi, compacta, solidiuscula, anfractibus sex, quorum duobus apicalibus, albovitreis, lævibus, cæteris concinné longitudinaliter obliquicostatis, costis arctis, tenuibus, nitidis, interstitiis planatis, apud suturas utrinque spiraliter fulvozonatis, simul ac à medio anfractus ultimi usque ad

basim extremam; apertura ovata, peristomate incrassato, margine columellari paullum expanso.

Long., 2, *Lat.* 1 *mill.*

A very small edition of such a species as *R. fasciata* A. Ad. Though only two millimetres in length, it is a finished shell, and the lip remarkably incrassate for its size. The whorls are six, two being apical and glassy white, the rest are obliquely costate, shining, with rufous zones on either side of and joining the sutures, and the basal half of the last whorl is of the same colour. A few specimens. (*zonula*, dim. of *zona*, a band).

Barleeia chrysomela sp. nov. (Pl. XI., fig. 68).

B. testa pyramidato-conica, semigradatula, lævissima, nitida, aurantio-fulva, tenui, anfractibus septem, paullulum tumescentibus, apud suturas spiraliter fulvo-brunneo vittatis, apertura parva, ovata, peristomate feré continuo, fulvo-brunneo vel nigrescente.

Long., 3, *Lat.*, 1·50 *mill.*

Many specimens of a small *Hydrocena*-like species, which has many characters in common with the genus *Barleeia* Clark, where we place it provisionally. A conical shell, shining, golden orange-brown, with spiral darker sutural band, the peristome being of the same colour and nearly continuous. The mouth is somewhat contracted. (*chrysomela*, golden apple, from the colour).

Rissoia joviana sp. nov. (Pl. XI., fig. 69).

R. testa oblonga, solidiuscula, ochracea vel ochraceo-cinerea, anfractibus decem (tribus apicalibus), ventricosis, ad suturas impresso-crenulatis, longitudinaliter rotundi-costulatis, costis interdum obscuris et irregularibus, spiraliter arcté liratis, apertura rotunda, labro extus simplice, columella alba.

Long., 4, *Lat.*, 1·50 *mill.*

An oblong ochraceous shell, rather stout, with ten whorls, three of them being apical and very small, the rest roundly ribbed, and transversely closely lirate, whorls ventricose and crenulately impressed at the sutures. Mouth round, lip simple,

columella white. We have this species also from Thursday Island. What appears to be another form of the same shell is also in the collection, with darker ochraceous spiral lines across the two last whorls, the longitudinal costæ obscure, and here and there wanting, apical whorls dark-brown.

Rissoia pyrrhacme sp. nov. (Pl. XI., fig. 70).

R. testa oblonga, delicatula, nivea, anfractibus novem (interdum octo), quorum apicalibus tribus, fulvo-ochraceis, cæteris albis, ventricosis, ad suturas crenulato-impressis, longitudinaliter costulatis, spiraliter arcte sulculosis, apertura rotundo-ovata, labro simplice, paullulum effuso.

Long., 6, *Lat.*, 2 *mill.*

A pure white ochre-tipped shell, whorls eight or nine, much swollen, longitudinally ribbed, spirally closely sulcate, aperture round, lip simple, a little effuse. We are not yet quite sure of the proper location of this and the preceding species, and only place them provisionally in *Rissoia*. If, indeed, they be *Rissoiæ*, they will, perhaps, be better included in a new section of the genus. Several specimens. (πύρρος ochre red, ἄκμη point).

Mathilda eurytima sp. nov. (Pl. XI., fig. 73).

M. testa delicata, pyramidato-fusiformi, alba, anfractibus decem, ventricosis, ad suturas impressis, spiraliter acute tricarinatis, carinis angulatis, interstitiis longitudinaliter clathratulis, clathris arctis, sub lente concinnis, ultimo anfractu quadricarinato, basi tornata, apertura ovato-rotunda, labro simplice, canali producto.

Long, 6, *Lat.*, 2 *mill.*

A most delicately lovely, though minute shell. A second specimen having occurred, the first, named provisionally *M. sinensis* by us in our last paper, has been carefully re-examined and found to be distinct from that species. The spiral keels are only three on the upper whorls, as against four in *M. sinensis*, the shell is not of thickened texture, and the

colour is a purer white. The size is about the same. (εὐρύτιμος, honoured, excellent).

Euchelus favosus sp. nov. (Pl. XI., fig. 74).

E. testa conica, perforata, scruposa, candida, apice depresso, planato, anfractibus quatuor, apud suturas profundè canaliculatis, penultimo et antepenultimo transversim bicarinatis, ultimo anfractu sex-carinato (inclusa spirali carina circa umbilicum), carinis longitudinalibus liris inter se junctis, interstitiis alveolatis, vel favosis, carinis elegantissimè acuté crenulatis, umbilico angusto, apertura rotunda, labro extus scruposo, intus planato, margine sicut columellari.

Long., 3, *Lat.* 2 *mill.*

Very small, but most beautiful in sculpture. Pure white, four whorled, including the depressed apex; sutures deeply canaliculate, the second and third whorls twice, the last six times keeled, including the spiral keel round the umbilicus, these keels are longitudinally joined by stout liræ, the interstices being honeycombed; the carinæ are most elegantly sharply crenulate all round; the mouth is round, outer lip rough with the edges of the keels, within smooth. Four specimens. (*favosus*, honeycombed).

Leucorhynchia tricarinata sp. nov. (Pl. XI., fig. 75).

L. testa perdepressa, albida, nitida, obtecté umbilicata, apice planato, anfractibus tribus circa suturas spiraliter crenelliferis, lævissimis, apud peripheriam ultimi anfractus tricarinatis, media carina fortissima, interstitiis carinarum sulcatis, ultimo apud basim circa callositatem peristomalem crenellifero, apertura circulari, peristomate columellarem apud marginem calloso, linguifero, prominente, regionem umbilicarem supra impendente, callositate ipsa sicut in typica L. caledonica.

Alt., 1, *Diam.* 3 *mill.*

A third species of *Leucorhynchia* Crosse, which genus we think sufficiently distinct from *Teinostoma* Ad., although M. Paul Fischer and Mr. Pilsbry hold a contrary opinion. From the type *L. Caledonica* Crosse, it differs in the tricarinate peri-

phery, the middle keel being strong, squarely built, and bold and projecting further from the whorl than the two other keels. Shell much depressed, apex papillary, sunk in the spire; spiral crenellæ run round the sutures and round the peristomial callosity, this being tongue shaped and well nigh concealing the umbilicus. One specimen only, discovered in the mouth of a larger shell by the Rev. Lewis Shackleford.

Alcyna lifuensis sp. nov. (Pl. XI., fig. 76).

A. testa imperforata, minuta, solidiuscula, parum nitida, anfractibus quinque, quorum apicalibus læte puniceis, tribus ultimis albis, transversim interrupto-lineatis, lineis rubris, ultimo anfractu infra, juxta suturas, squarrosé regulariter albispatiato, et apud peripheriam concinné rubra linea spatio simili alternato, apertura rotunda, labro exteriore subexpanso, columella ad basim fortiter unidenticulata, denticulo acuto.

Long., 1·75, *Lat.*, 1 *mill.*

Smaller than *A. rubra* Pease, and differing from all the forms we have seen of it, and likewise of the Japanese *A. ocellata* A. Ad. in the whorls being plainly five in number, and in the different pattern of the interrupted red lines, the shape being more effuse than *A. ocellata*, and the shell smaller than in *A. rubra*. There seem affinities with *A. lineata* Pease from the Hawaiian Islands, of which we have only seen a description, but here the whorls are fewer, the lip is not thickened out, the apex is pink, not white. Though small, it is a very brightly coloured little shell, being five whorled, the whorls slightly swollen, white, with transverse interrupted red lines encircling it spirally, round the periphery these lines are regularly interrupted, leaving equal white spaces, below the suture on the last whorl are square white spaces left bare, the mouth is round, lip slightly effuse, plain; the columella having a very strong tooth near the base.

Minolia agapeta sp. nov. (Pl. XI., fig. 77).

M. testa minuta, effuso-conica, albida, solidiuscula, anfractibus quinque, turritis, infra suturas angulatis, spiraliter

distinctè et acutè liratis, interstitiis longitudinaliter tenuissimè striatis, ultimo quoque anfractu apud peripheriam angulato, circá angulum suturalem flammis puniceis depicto, ad anguli peripheralis costam puniceo-punctato minoribus etiam punicei coloris punctis hic illic obscurè decorato, umbilico profundo sed angusto, superficie basali simili modo ac superna spiraliter lirata, apertura rotunda, peristomate crassiusculo, paullum reflexo, ferè continuo, intus puniceo-tincto.

Alt. 4, *Diam.* 4·50 *mill.*

A smaller species than the other Loyalty Island species of this genus. The shell is five-whorled, including the apical, white, angled below the sutures and in the last whorl, again at the periphery; also painted round the sutures below with crimson coloured equi-distant flames. At the periphery, the spiral rib is encircled with minute pink dots; the whole shell is beautifully acutely spirally striate, the interstices, with the aid of a lens, appear finely striate longitudinally. The mouth is round, peristome thickened, a little reflexed; umbilicus deep, but narrow. A few specimens. (ἀγάπητος beloved, choice).

Solariella (Conotrochus) tragema sp. nov. (Pl. XI., fig. 78).

S. testa conica, albo-calcaria, profunde umbilicata, delicata, anfractibus sex, gradatulo-turritis, unangulatis, undique transversim spiraliter costulatis, costis tornatis, interstitiis alveolato-decussatis, inter suturas et angulum anfractuum regulariter flammis puniceis sparsim decoratis, ultimo anfractu apud peripheriam simili modo unangulato, et infra, quadricostato, apud basim umbilico profundo sed angusto, undique spiraliter costulato, ut suprá, interstitiis simili modo decussatis, apertura rotundato, peristomate tenui, simplice.

Long., 2·50, *Lat.* 1·75 *mill.*

Eight specimens of a small conical chalky-white *Solariella*, colourless excepting for scattered transverse pink flames round the upper parts of the lower whorls just below the sutures. The shell is profoundly but narrowly umbilicate, whorls six, two being apical, slantingly angled in a gradate manner. The sur-

face is closely acutely ribbed, the transverse decussations somewhat noticeable in the interstices, and these in some specimens give a crenulate appearance to the ribs themselves. The base is spirally costulate, as are the upper whorls; the mouth round, outer lip simple. No doubt this species is nearly allied to *Minolia Holdsworthiana* G. Nevill from Ceylon, and *M. singaporensis* Pilsbry, of which we have only seen figures; but it differs from both these species by several salient characters. We are of opinion this group comes nearer *Solariella* than *Minolia*; perhaps it would be well to separate them generically as *Conotrochus* Pilsbry. (*τράγημα* a delicacy).

Cadulus viperidens sp. nov. (Pl. XI., fig. 79).

C. testa mediocri, subinflexa, perlævi, apud apicem sicut ad aperturam basalem paullum attenuata, delicata, pellucida, lactea, apertura rotunda, margine tenui, apertura posteriore perparva, margine labialiter acuté bifisso, tenui.

Long., 6·50 *mill.*

Diam., oris, 1 *mill., sp. maj.*

,, *apicalis*, 0·50 ,,

Several specimens of a somewhat incurved, perfectly smooth, translucent, milky-tinged *Cadulus*, precisely corresponding with unnamed specimens in the British Museum from the shores of North Australia. In form it slightly recalls *C. colubridens* Wats. from New Zealand ('Challenger' Expedition), but is more uniform in width and less ventricose towards the base. It is likewise smaller than either that species, the common tropical *C. gadus* Montagu, or *C. Jeffreysii* Monterosato. The mouth is simple, round, the posterior or apical orifice, also round in diameter, has its edges labially bisected by a sharply-cut channel. The specific name chosen, "viper-fanged," is self-evident from the form.

Tornatina Hadfieldi sp. nov. (Pl. XI., fig. 80).

T. testa oblonga, lævissima, recta, tenui, albo-lactea, anfractibus quatuor, ad suturas canaliculatis, ultimo anfractu oblongo, magno, sub lente spiraliter striolato, suprá medium

semipellucidis fenestralibus vittatis catenis spiraliter succincto, apertura oblonga, apud basim latiore; labro extus recto, simplice, margine columellari uniplicato.

Long., 4, *Lat.*, 1·50 *mill.*

A curious species, which, of plain appearance, is relieved by a spiral band on the last whorl, just above the middle, of semi-pellucid window-like filleted catenations; this is not, so far as we can make out, owing to any less deposit of shelly matter, but the whole substance, while as thick, is rendered semi-transparent by some process that needs further study. We do not know of this character in any other species. Many specimens. To this, one of the most interesting of this consignment, we append the name of the discoverers, the Rev. James and Mrs. Hadfield.

NOTES ON A COLLECTION OF SHELLS FROM LIFU AND UVEA, LOYALTY ISLANDS, FORMED BY THE REV. JAMES AND MRS. HADFIELD. WITH LIST OF SPECIES.

PART II. *(continued).*

BY JAS. COSMO MELVILL, M.A., F.L.S., & ROBERT STANDEN (Assistant-Keeper, Manchester Museum).

(Read before the Conchological Society, February 10th, 1897).

Drillia cygnea sp. nov. (Pl. XI., fig. 82.)

D. testa fusiformi, crassa, lævi, nitida, candidissima, anfractibus sex vel septem, apicalibus . . . ? cæteris perlævibus (sub lente superficialiter striatulis), ventricosulis, longitudinaliter costatis, costis rectis, uniformibus, ad utrumque anfractum octo; apertura ovata, labro extus perincrassato, præcipué suprá, canali brevi, sinu obscuro in speciminibus nostris.

Long. 15, *Lat.* 7 *mill.*

A pure white, shining, massive little species, with uniform straight longitudinal ribs, the surface being nearly smooth and shining. Ribs of the last three whorls continuous, and about eight in number. Four specimens.

(*cygneus*, swan-like).

Odostomia versicolor sp. nov. (Pl. XI., fig. 83.)

O. testa subturrita, attenuato-fusiformi, gracillima, delicata, anfractibus novem, quorum duobus apicalibus, pervitreis, cæteris ventricosulis, præcipué supernis, spiraliter delicatissimé striatulis, et supernis decussatis, ad medium et infrá anfractus ante-penultimi et trium superiorum hic aurantiotinctis, hic pallidé puniceis, illic unicoloribus; ultimo anfractu recto, prolongato; apertura oblonga, labro paullum effuso, tenui, columella uniplicata.

Long. 5, *Lat.* 1·50 *mill.*

The shell is very graceful and delicate, attenuate, aciculate, nine whorled, two whorls being apical, the fourth, fifth, and sixth tinged in the lower half with either chestnut, yellow, pale-pink, or left wholly white and unicolorous; the antepenultimate whorl is often similarly tinged, but the last two whorls are white; the last is prolonged and straight. Mouth ovate, oblong; outer lip slightly effuse, thin; columella one-plaited. A few specimens.

Allied to *O. striata* Pease, but the whorls are transversely striate and delicately decussate. It is not a typical *Odostomia*, but our knowledge of that genus and its allies is at present so unsatisfactory, that we do not know precisely where to locate it.

Elusa gradatula sp. nov. (Pl. XI., fig. 84.)

E. testa attenuata, gradata, fusiformi, per-gracili, nivea, lævi, anfractibus decem, turritis, lævibus, longitudinaliter minuté et arcté costulatis, costis nitidis, interstitiis per-lævibus; apertura ovata, labro tenui, columella uniplicata.

Long. 4·50, *Lat.* 1·50 *mill.*

This shell has some affinity with *Pyrgulina pyrgomella* Melv., described recently from Bombay. The whorls are ten, attenuate, gradate, very slender, white, smooth, uniformly very finely longitudinally costulate. Columella once-plaited.

Olivella Williamsi sp. nov.

O. testa fusiformi, polita, anfractibus sex, apud suturas profundé canaliculatis, et excavatis, per-lævibus, anfractu ultimo oblongo, candido, flammis vel lineis fulgetrinis castaneis concinné decorato, apertura angusta, oblonga, labro incrassato, columella 7-8 *plicata.*

Long. 15, *Lat.* 7 *mill.*

A well-marked, exceedingly pretty *Olivella*, which is not to be found either in the British Museum, Mr. Williams' collection, or any of the collections, public or private, we have been able to examine. Nor is any mention made of it in Mr. F. P. Marrat's Monograph of the genus in Sowerby's "Thesaurus Conchyliorum."

Mr. Williams writes us, that though in good condition, the markings in a quite fresh specimen would probably be much clearer and more characteristic. The shell is fusiform, polished, the whorls six, deeply canaliculate and excavate at the sutures; the last whorl and the penultimate are ornamented with clearly-drawn longitudinal zigzag chestnut lines; the mouth is narrow, oblong, outer lip thickened, columella 7-8 plaited.

× 2.

We have very much pleasure in connecting with this little *Olivella* the name of our friend, Mr. J. Michael Williams, of Liverpool, whose collection of Olives embracing as it does, so many types and unique or rare species and varieties, is probably the best extant at the present time, and to whom we have submitted the whole of the genus in our Loyalty Islands' collections.

NOTES ON A COLLECTION OF SHELLS FROM LIFU AND UVEA, LOYALTY ISLANDS, FORMED BY THE REV. JAMES AND MRS. HADFIELD, WITH LIST OF SPECIES.

Part III.

By JAS. COSMO MELVILL, M.A., F.L.S., & ROBERT STANDEN (Assistant-Keeper, Manchester Museum).

Read before the Conchological Society, June 16th, 1897).

The present instalment of our work on the Lifu Mollusca contains a second list of the species observed up to the present time. For convenience we have arranged the families in the same order as in our previous catalogue (*antea* pp. 84-132), and we have included in the enumeration the new species described by us (*antea* pp. 273-315, 379-381). These are referred to by the letters "M. & S.," with an indication of the pages where the original diagnosis will be found.

Class GASTROPODA.

Order PULMONATA.

Family *AURICULIDÆ*.

Melampus crassidens Gassies.—A conspicuous *Melampus*: as the specific name implies, the columellar teeth, and more especially the basal one, are thick and prominent.

Auricula Hanleyana Gassies.—An endemic species.

Order OPISTHOBRANCHIATA.

Family *BULLIDÆ*.

Tornatina Hadfieldi M. & S., p. 314, 1896.

Bulla punctata A. Ads.—We can find no appreciable difference between our specimens and those coming from the shores of Panama.

Family *SCAPHANDRIDÆ*.

Smaragdinella glauca Quoy.—One perfect small example, transparent, and pale green. Also from New Ireland.

FAMILY *APLUSTRIDÆ*.

Aplustrum thalassiarchi Mart.—Small, but characteristic. Only two occurred. Mauritius.

FAMILY *OXYNOEIDÆ*.

Oxynoe Vigourouxi Crosse.—Four examples, quite perfect.

ORDER PROSOBRANCHIATA.

FAMILY *CONIDÆ*.

Conus (Hermes) mitratus Bruguière.—One beautiful and finely-marked specimen. Occurs also in the Philippines.

Drillia cygnea M. & S., p. 379, 1897.

D. ione M. & S., p. 277, 1896.

D. Mariesi Souverbie.—One specimen of a neat dark-brown shell, elegantly noduled with white spiral beading, which agrees with specimens of M. Souverbie's species in our National Collection. From Uvea.

D. Rougeyroni Souverbie = **D. barkliensis** H. Adams.—Our three specimens are a little worn, but we think we are right in the identification. A dark-umber shell, spirally tornate, and noduled.

D. themeropis M. & S., p. 278, 1896.

D. vidualoides Garrett.—A small and very pretty form, perhaps too nearly allied to *D. vidua* Rve. or *D. unizonalis* Lam., with which latter it is united by some authors.

D. xanthoporphyria M. & S., p. 278, 1896.

D. (Clavus) formosa Reeve = **D. lactea** Hinds.—Of the same character is *D. vidua* Rve. Recorded also from various distant Polynesian stations.

D. (Clavus) gibberulus Hervier, J. de Conch., vol. xliii., p. 143, for 1895 (1896).—Many specimens of an elegant smooth straw-coloured shell, with irregular prominent longitudinal ribs.

D. (Clavus) protentus Hervier.—Too near, in our opinion, to *D. vidua* Reeve.

Borsonia bifasciata Pease.—Exactly agreeing with Sandwich Island types in the British Museum, but surely a *Clathurella*.

B. lutea Pease.—A pale straw-coloured shell, equally well placed as *Glyphostoma*.

B. nigrocincta Montrouzier.—Quite typical, and in good condition. The genus *Borsonia* Bellardi, founded in 1839 on a fossil possessing a columellar plait, has been extended to embrace a few recent N. Caledonian species, but in our humble judgment they intergrade with *Glyphostoma* and other *Mangilia*, and we only keep them separate now for the sake of comparison with Tryon's Manual.

Mangilia agna M. & S., p. 279, 1896.

M. bascauda M. & S., p. 279, 1896.

M. calathiscus M. & S., p. 280, 1896.

M. eumerista M. & S., p. 280, 1896.

M. himerodes M. & S., p. 281, 1896.

M. himerta M. & S., p. 281, 1896.

M. orophoma M. & S., p. 282, 1896.

M. stibarochila M. & S., p. 283, 1896.

M. thalycra M. & S., p. 283, 1896.

M. thiasotes M. & S., p. 284, 1896.

M. (Clavatula) rubida Hinds.—Many specimens. It seems variable, both as to size and form. Some are more oblong than is normal, the ribbing then being not so pronounced. All, however, agree in colour and marking. *M. rubida* is of wide distribution, being recorded from Mauritius, New Guinea, New Ireland, Fiji Islands, and Cook's Island (Tryon).

M. (Clavatula) zonata Reeve.—A prettily-banded species; also recorded from the Philippines.

M. (Cythara) conohelicoides Reeve.—Large and well-marked. Plentiful.

M. (Cythara) euselma M. & S., p. 284, 1896.

M. (Cythara) gibbosa Reeve.—Only one example. Allied to *C. interrupta* Reeve in the character of its sculpture and marking, but of a different form. Recorded from the Philippines.

M. (Cythara) gracilis Reeve.—Very beautiful, and strikingly marked with orange-brown square spots spirally arranged across the smooth ribs. The form also is attenuate-fusiform, and very graceful. Also a native of the Fiji and Philippine Islands.

M. (Cythara) interrupta Reeve.—Conspicuous for its fusiform shape, somewhat attenuate at both ends, with transverse interrupted stretched brown lines between the ribs. Allied to *M. bella* Reeve, and *M. theskela* M. & S. *Mitra cimelium* Rve., also found at Lifu, has the same interrupted linear marking. Of very wide distribution, from Mauritius, throughout Polynesia, to the Sandwich Isles. Also recorded from the Philippines.

M. (Cythara) matakuana Smith.—Conspicuous for robustness of form, and dorsally blotched with burnt-sienna marking.

M. (Cythara) paucimaculata Angas.—A handsome orange-mouthed species, which seems variable. The types in the British Museum came from S. Australia.

M. (Cythara) psalterium M. & S., p. 285, 1896.

M. (Cythara) signum M. & S., p. 286, 1896.

M. (Cythara) Souverbiei Tryon.—A beautiful but very variable species, of which we received a dozen specimens. In some, the dorsal brown blotch is almost absent; others are spotted with brown; others, again, unicolorous white.

M. (Glyphostoma) Aubryana Hervier. — A wonderful shell. Principally conspicuous for its colouring rather than its form, which is that of a typical incrassate *Glyphostoma*; the ground colour is white; round the upper part of the penultimate whorl runs a bright pink median band,

the lower half of the whorl being white, the antepenultimate suffused pink of a lighter hue, apex pink, the intermediate whorls white or straw colour, the last whorl having just below the suture a narrow straw-coloured band, then a broad white space, and towards the base, again, unicolorous straw colour. Two specimens. We refer to M. Hervier's description for fuller details, J. de Conch., vol. xliii., p. 146, for 1895 (published 1896).

M. (Glyphostoma) chrysolitha M. & S., p. 286, 1896.

M. (Glyphostoma) crassilabrum Reeve. — A handsome species, occurring rarely in our consignments. It shows some little variation both in form and sculpture. Recorded from the Philippines.

[**M. (Glyphostoma) cremonilla** M. & S., J. of Conch., vol. viii., p. 96, 1895.—This name has precedence over *M. (G.) lamproideum* Hervier (J. de Conch., vol. xliii., p. 144, for 1895, *published* 1896.) We have also two or three very elegant pink varieties of this species. These are smaller than the type.]

M. (Glyphostoma) Crosseana Hervier. — An interesting straw-coloured shell, banded with transverse brown liræ. Four specimens.

M. (Glyphostoma) dialitha M. & S., J. of Conch., vol. viii., p. 287, 1896.

M. (Glyphostoma) globulosa Hervier.—One specimen of a pale straw-coloured shell, which we assume by the description (J. de Conch., vol. xliii., for 1895, p. 147) to be this new species, though even more globular than is represented in the plate. It seems very distinct.

M. (Glyphostoma) Goubini Hervier.—Three specimens. A very elegant little form, light violet with a white transverse band around the last whorl. A very small species, well described by M. Hervier (J. de Conch., vol. xliii., for 1895, p. 149).

M. (Glyphostoma) infracincta Sowerby.—An exceedingly beautiful little shell, variable in size, pale flesh-colour pink, with brown transverse banding.

M. (Glyphostoma) Jousseaumei Hervier (?)—One or two somewhat doubtful. A pretty orange-pink species.

M. (Glyphostoma) latirella M. & S., p. 287, 1896.

M. (Glyphostoma) melanoxyta Hervier. Many specimens of an elegant small fusiform shell, evidently, from the detailed description of the author, the above species (described in J. de Conch., vol. xliii., p. 150).

M. (Glyphostoma) notopyrrha M. & S., p. 288, 1896.

M. (Glyphostoma) ocellata Jousseaume (Bull. Soc. Zool. France, ix., p. 184, 1884).—The most beautiful of all the little *Pleurotomidæ*, in our opinion. Two specimens only. This species is the type of the genus *Lienardia* Jouss., which, in our opinion, is a synonym of *Glyphostoma*; white, coarsely ribbed, the interstices being roundly and regularly blotched with pale-straw colour, margined with circular brown lines. A single spiral brown line also crosses the last whorl at the periphery. Mouth oblong, sinus deep, outer lip much incrassate and coarsely toothed. It was with some little difficulty we succeeded in naming our specimens, no example being found in the British Museum, and we believe, till now, only one typical specimen, well figured but not coloured in the publication above referred to, has been discovered, and this was from Mauritius. It is, indeed, one of the special gems of the collection.

M. (Glyphostoma) rhodacme M. & S., p. 288, 1896.

M. (Glyphostoma) strombilla Hervier.—Two specimens of a small and very angulate form, pale-straw colour, and unspotted.

M. (Glyphostoma) thalera M. & S., p. 289, 1896.

M. (Glyphostoma) theoteles M. & S., p. 289, 1896.

M. (Glyphostoma) thepalea M. & S., p. 290, 1896.

M. (Glyphostoma) thereganum M. & S., p. 291, 1896.

M. (Glyphostoma) thesaurista M. & S., p. 291, 1896.

M. (Glyphostoma) thyridota M. & S., p. 292, 1896.

Clathurella Blanfordi G. & H. Nevill.—We cannot separate a little violaceous species from one recorded from Ceylon by Nevill.

C. caletria M. & S., J. of Conch., vol. viii., p. 293, 1896.

C. cavernosa Reeve.—One specimen. A prettily-coloured but very small shell, pale violet clouded over with ochreous. Recorded from the Philippines and Fiji Isles.

C. clandestina Deshayes.—A pale purple species, curiously like *Thala mirifica* Reeve, to outward seeming.

C. cnephæa M. & S., J. of Conch., vol. viii., p. 293, 1896.

C. commoda Smith.—An exceedingly delicate species, transparent and finely latticed, with here and there orange-brown staining. Described originally from South Africa.

C. episema M. & S., J. of Conch., vol. viii., p. 294, 1896.

C. felina Hinds.—Small, but typical.

C. lita M. & S., J. of Conch., vol. viii., p. 294, 1896.

C. longa M. & S., p. 295, 1896.—This name must yield to *M. (Glyphostoma) trigonostomum* Herv., *published* September, 1896, and consequently having precedence of two months. Judging from the plate, our specimens are not so perfect, especially in the mouth and thickened outer lip, as those in M. Hervier's possession.

C. Malleti Recluz.—Small, but brilliant carnation in colour, with a tinge of violet. Recorded from the Navigator and other Polynesian Islands. Extremely abundant, over two hundred specimens occurring; probably a *Glyphostoma*.

C. polynesiensis Reeve.—Almost typical. We have lately seen this widely-distributed *Clathurella* from Karachi and the Nubian coast, dredged by Captain Shopland and Mr. F. W. Townsend. Also there are specimens from the Persian Gulf and Fiji in the National Collection. It is

very near, if not identical with, *Glyphostoma parthenicum*, described by M. Hervier (1896).

Clathurella Reeveana Deshayes.—Very delicate, attenuate, white, microscopically decussate, with clear receding orange-brown lines, two on each whorl, base dorsally blotched with the same colour. Found also in Mauritius and Isle of Bourbon; also recorded from Polynesia. Connecting *Daphnella* with *Clathurella*, it might be included in either section.

C. rissoides Reeve.—A large smooth shell, beautifully spirally filleted with chalky-white beading; outer lip and columella quite smooth. Evidently a very rare form. It has been reported from Ticao Island.

C. rubicunda Gould.—Also recorded from Loochoo. Very beautiful, though small; pink, many and close-ribbed, with indistinct white band round the middle of the last whorl. On the border-land between *Clathurella* and *Glyphostoma*.

C. Rogersi M. & S., J. of Conch., vol. viii., p. 295, 1896.

C. rufozonata Angas.—Peculiar for the spiral red linear banding round the upper whorls, and again twice or thrice similarly banded on the last whorl, the general colour being pale stramineous.

C. spyridula M. & S., J. of Conch., vol. viii., p. 296, 1896.

C. tincta Reeve.—Only one example, nearly allied to *C. albifuniculata* Reeve, with which Tryon, but we think erroneously, unites it. It is also near our *P. Hadfieldi*, which we at the time of description called a *Drillia*, but which falls more naturally into the section *Clathurella* of *Mangilia*. We obtained several of this latter in the second consignment.

Daphnella boholensis Reeve.—A Philippine species extending to the Loyalty group. Very variable in colour, and even form, as some examples are almost turreted in the whorls. All agree in the minute decussation and pale straw colour, the apical whorls often dark brown.

Daphnella delicata Reeve.—An exceedingly graceful species, attenuate, finely chased, and spotted with chestnut. Two specimens only.

D. pluricarinata Reeve. — An exquisite little shell, the apical whorls (3) dark-brown, and shewing plainly in contact with the straw colour of the remaining whorls. The decussation on the apical whorls is remarkable. Also a Philippine Island shell.

D. terina M. & S., p. 296, 1896.

D. thespesia M. & S., p. 297, 1896.

D. varicosa Souverbie—One specimen only, which seems to meet M. Souverbie's description. We have not seen a type.

[**D. dulcinea** M. & S., 1895.—Of this species we obtained three or four fresh specimens in the present consignment; we now withdraw it from *Daphnella*, where we provisionally placed it (J. of Conch., vol. viii., p. 95), and consider it a *Mangilia*, allied to *M. agna*].

FAMILY *CANCELLARIIDÆ*.

Cancellaria (Trigonostoma) contabulata Sowerby.—A fair number, identical with Ceylonese examples.

FAMILY *OLIVIDÆ*.

Oliva (Strephona) polita Marratt.—Two examples, almost exactly agreeing with typical West Indian *O. polita*. Mr. J. M. Williams, to whom we referred these shells, says he can find hardly any difference.

O. textilina Lam. var. **albina.**—One very fine and beautiful example, of an ivory polished whiteness.

O. (Strephona) todosina Duclos.— Identical with Fijian specimens, but all somewhat worn. With a lens, however, traces of the marking are very perceptible.

Olivella nympha Adams & Angas. --Also found in Australia, and we believe Bombay specimens recently to hand are a mere variety of Adams and Angas' species.

Olivella Williamsi M. & S., p. 380, 1897.

FAMILY *MARGINELLIDÆ*.

Marginella (Glabella) suavis Souverbie. Extremely pretty, pure white and shining, with a chestnut yellow spiral band across the centre of the last whorl.

FAMILY *MITRIDÆ*.

Mitra digitalis Reeve.—One small, but beautifully marked example.

M. (Costellaria) Dorotheæ M. & S., p. 297, 1896.

M. (Cancilla) carnicolor Reeve.—Our somewhat worn examples seem to harmonize with Reeve's description. The coloration is exquisite in one example, being white, suffused with the most delicate pink, and the spiral carinæ are pale horn colour, spotted. Also from Chinese seas.

M. (Cancilla) incarnata Reeve.—Also a Philippine species.

M. (Chrysame) Antonii Küster.—Orange examples. Mostly a little worn. Rare; we only obtained four specimens. Mauritius is its head quarters.

M. (Chrysame) caledonica Petit. A stout handsome brown species.

M. (Chrysame) pellis-serpentis Reeve.—One fresh, fine and typical example.

M. (Chrysame) Rüppelli Reeve.—Small, but we think correctly named. It is allied to *M. Hanleyi* Reeve, from the Red Sea.

M. (Chrysame) tabanula Lamarck.—Typical individuals of a red-brown, and beautifully spirally ribbed. Also from Mauritius.

M. (Chrysame) telescopium Reeve.—One characteristically marked individual.

M. (Chrysame) tornatelloides Reeve.—Also from Philippines.

M. (Strigatella) auriculoides Reeve.—A few typical examples.

M. (Pusia) aureolata Swainson. Bright orange, with white banding. Perhaps a var. of *M. affinis* Reeve. Also found at Mauritius.

M. (Pusia) cimelium Reeve.—Many fine specimens of a shell hitherto represented by three small individuals in our National collection. The interrupted spiral chestnut scratched lines between the ribs are characteristic.

M. (Pusia) rubra Reeve.—Small, but of brilliant pink, with white spiral banding. The examples in our National collection came from Lord Hood Island.

M. (Pusia) turturina Souverbie.—A well marked species, of which we have received but few examples. It appears to be endemic.

M. (Costellaria) cineracea Reeve. Worn examples, agreeing with specimens in J. C. M.'s collection.

M. (Dibaphus) edentulus Phil. One fine example. Also found in Mauritius.

M. (Thala) mirifica Reeve.—Two specimens, one much larger than the other. Also recorded from the Philippines. Pale violet; in sculpture much resembling *Clathurella clandestina*, only larger, and, of course, possessing the columellar plaits of the *Mitridæ*. *Thala*, perhaps, is best separated as a genus, on conchological grounds; it might well be considered an intermediate between the *Mitræ* and *Pleurotomæ*, especially as there are traces of sutural sinus.

FAMILY *BUCCINIDÆ*.

Engina nodicostata Pease. One pretty, but rather water-worn example. Recorded also from Hawaii.

FAMILY *NASSIDÆ*.

Nassa (Niotha) granulosa Marratt. Perhaps may be a pale variety of *N. splendidula* Dunker. The author gave no locality with his description.

N. (Niotha) rotunda M. & S., p. 273, 1896.

Nassa (Niotha) splendidula Dunker.—A highly coloured shell, fulvous-chestnut. Also recorded by its author from the Philippine group.

N. (Telasco) ecstilba M. & S., p. 274, 1896.

N. (Telasco) Shacklefordi M. & S., p. 274, 1896.

N. (Hebra) echinata A. Adams.—Typical, but rather worn. Another Philippine species.

FAMILY *COLUMBELLIDÆ*.

Columbella (Mitrella) moleculina Duclos.—A very beautifully marked *Mitrella*, being quite smooth, ochraceous, with round white spaces, and darker filleted spiral interrupted bands between.

C. (Mitrella) sigaloessa M. & S., p. 276, 1796.

Columbella (Conidea) Peasi Martens—**C. varia** Pease *non* Low.—Mr. Stephen Pace kindly named our examples of this variable species. The headquarters are the Sandwich Isles.

C. (Seminella) Stepheni n.n.—Mr. Edgar A. Smith having (Ann. N.H., xvi., p. 5, 1896) described a *Columbella* from Coromandel under the name *C. Pacei*, we suggest the above specific name in place of the one previously given (*antea* p. 275), which will equally commemorate Mr. Stephen Pace.

FAMILY *MURICIDÆ*.

Murex (Ocinebra) brachys M. & S., p. 273, 1896.

FAMILY *TRITONIDÆ*.

Triton (Epidromus) bracteatus Hinds.—One example only.

FAMILY *CYPRÆIDÆ*.

Ovula (Cyphoma) gibbosa Linné. Only one specimen.

Cypræa contaminata Gray.—Two worn shells we refer to this rare little species.

C. hirundo Linné.—Several specimens, quite typical.

C. (Luponia) Thomasi Crosse.—One very pretty specimen which perhaps is too nearly allied to *C. cernica* Sowb. or

C. spurca L., but the dorsal confluent markings seem characteristic, and the lateral spotting at once separates it from, at all events, typical examples of *C. cernica*.

Trivia exigua Gray=**T. tremeza** Duclos.—Many beautiful and fresh examples of this exquisite species, the most recherchée perhaps of the smaller *Triviæ*. It is recorded from the Sandwich Islands, as well as the New Caledonian group.

T. globosa Gray.—Two characteristic specimens. Of wide distribution; we see no difference between the shells from the Eastern, as opposed to those from the Western Hemisphere. It extends from the West Indies, Sandwich Islands, to Australia; it may almost be deemed cosmopolitan within the tropics. It is not, however, very commonly found in collections.

T. grando Gask.—Also recorded from Manila. Apparently typical. Several specimens.

T. pellucidula Gask.—Four examples of what is apparently this species.

T. vitrea Gask.—Several specimens; also recorded from the Philippines.

FAMILY *CERITHIIDÆ*.

Triforis carteretensis Hinds.—A plain species with grooved plain spiral keels. The British Museum specimens, with which ours have been compared, are from New Ireland.

T. cinguliferus Pease. Several specimens. Also from the Sandwich Islands.

T. hilaris Hinds.—A variegated species with close receding keels. Several specimens. Also from the Sandwich Islands and the Philippines.

T. obtusalis Jousseaume.—An obese black noduled shell.

T. ruber Hinds.—Pale violet, not red, as the name would suggest. Exceedingly abundant. It also occurs at New Ireland, Tahiti, and Isle of Bourbon.

Triforis tristoma Blainville.—One beautiful specimen, in fresh condition, and characteristic. Also from Australia.

T. (Ino) collaris Hinds.—Very pretty and striking, with spiral rows of gemmules on a darker body-ground. Many examples. Also from the Hawaiian Islands.

T. (Ino) corrugatus Hinds.—A well-known conspicuous species.

[We have also in the collection many unidentified species of *Triforis*].

Cerithium abbreviatum Brazier.—Many, of ordinary character.

C. (Vertagus) attenuatum Phil.—Perhaps more commonly known under the name of *C. longicaudatum*. It is a handsome form with a conspicuously retrorse canal.

Biltium æolomitres M. & S., p. 298, 1896.

B. albocinctum M. & S., p. 299, 1896

B. marileutes M. & S., p. 299, 1896.

B. uveanum M. & S., p. 299, 1896.

Cerithiopsis adelpha M. & S., p. 302, 1896.

C. aurantiaca M. & S., p. 300, 1896.

C. catenaria M. & S., p. 300, 1896.

C. eutrapela M. & S., p. 301, 1896.

C. Fosteræ M. & S., p. 301, 1896.

C. hedista M. & S., p. 302, 1896.

FAMILY *PLANAXIDÆ*.

Plesiotrochus Souverbianus Fischer.—We (erroneously) included in our first list this species under the name of *Cerithium dubium* Sowb., to which it bears some superficial resemblance. It is a highly interesting species, allied to the Australian *Riselle*, trochoid in shape, and beautifully crenulated, also mottled with brown bands and lines. A great many specimens.

FAMILY *VERMETIDÆ*.

Vermetus *cf.* glomeratus Chem.—About half-a-dozen small contorted groups of what may be this Philippine form

judging from their similarity to plate and description. We have not been able to compare it with any specimens.

Vermetus (Siphonium) maximus Sowb.—We have what is evidently the many-coiled horny operculum of this *Vermetus*, known as a native of the New Caledonian group, but no shells.

FAMILY *TURRITELLIDÆ*.

Mathilda eurytima M. & S., p. 310, 1896.

FAMILY *SOLARIIDÆ*.

Solarium (Philippia) cingulum Sow.—A few examples. Found also in Philippine, Sandwich, and Fiji Islands.

S. (Philippia) hybridum Linné.—Several, of ordinary character.

FAMILY *LITIOPIDÆ*.

Litiopa limnophysa M. & S., p. 305, 1896.

Alaba zadela M. & S., p. 305, 1896.

FAMILY *RISSOIIDÆ*.

Rissoia joviana M. & S., p. 309, 1896.

R. pyrrhacme M. & S., p. 310, 1896.

R. (Alvania) pisinna M. & S., p. 305, 1896.

Rissoina baculum-pastoris M. & S., p. 306, 1896.

R. catholica M. & S., p. 306, 1896.

R. crassa Angas.—Many of a prettily costate, white shell; recorded both from Red Sea and Australia.

R. enteles M. & S., p. 307, 1896.

R. elegantula E. A. Smith.—A white shell with close-grained longitudinal ribs, very delicate and elegantly formed. Also from S. Australia.

R. nesiotes M. & S., p. 307, 1896.

R. scalaroides C. B. Adams.—A very delicate species, identified by Tryon as synonymous with *R. bryerea* Mtg.; a native of Cuba and Jamaica.

R. sincera M. & S., p. 308, 1896.

R. turricula Pease.—Similar to *R. crassa* in many respects. Our specimens agree with var. *cernica* from Mauritius in

the British Museum. The typical form is from Sandwich Islands and Fiji.

Rissoina variegata Angas. — Abundant, and brilliantly banded in some cases with ochre or fulvous, while other examples are white and plain. We lately received from Mr. Arnold Umfreville Henn this shell from Sydney, N.S.W.

R. zonula M. & S., p. 308, 1896.

R. (Phosinella) Deshayesi Schwartz.—Common. Found also in the Philippines.

R. (Phosinella) quasillus M. & S., p. 308, 1896.

R. (Pyramidelloides) insolita Deshayes.—A curious form with the receding ribs beaded and prominent. The name *insolita* evidently suggests its unaccustomed appearance. The range is wide, embracing the Red Sea, Japan, Mauritius, and Indian Ocean

Barleeia chrysomela M. & S., p. 309, 1896.

FAMILY *NARICIDÆ*.

Vanikoro Gueriniana Recluz.—One example of a beautifully-ribbed and sub-crystalline species in very perfect condition. Also from the Philippine Islands.

V. Souleyetiana Recluz. —Few specimens. A smooth, white, plain *Vanikoro*. We may here call attention to the fact that *Vanikoro* Quoy has precedence over *Narica* Recluz and *Leucotis* Swains. This species is also known from Ceylon and the Paumotus Islands.

FAMILY *LAMELLARIIDÆ*.

Caledoniella Montrouzieri Souverbie. - One specimen only of this very rare and obscure mollusc; allied to *Lamellaria* and *Coriocella*. It is small, and *Vitrina*-shaped, very depressed, translucent, white, and delicate.

FAMILY *SCALARIIDÆ*.

Scalaria angustata Dunker.—A small form of this widely-distributed species. A great many examples.

S. eranna M. & S., p. 276, 1896.

Scalaria exomila M. & S., p. 277, 1896.

S. (Cirsostrema) bicarinata Sow.—Two specimens. The form is abnormal and peculiar.

FAMILY *EULIMIDÆ*.

Stylifer dubius Baird. Found in a Holothurian stomach by Mr. Hadfield. Two specimens, quite perfect.

Eulima caledonica Morelet.—Many specimens.

E. dentiens Dunker. — Also recorded for the Viti or Fiji Islands. This species seems to us identical with *Rissoina curta* Sow., sometimes known as *Eulima curta*.

E. solida Sow.—Many, but all slightly worn. Also recorded from the Sandwich Isles.

E. (Subularia) aciculata Pease.—Four living shells, taken from stomachs of Holothurians, have been submitted to Mr. E. A. Smith, who considers them to be this species. It is recorded from the Sandwich Islands.

Leiostraca Metcalfei A. Adams.—Beautifully marked with angular and branching interrupted chestnut lines. Quite typical, but not very large. Also recorded from Hawaii. About ten specimens.

FAMILY *PYRAMIDELLIDÆ*.

Obeliscus terebelloides Adams. — Two examples of this prettily chestnut-banded shell, only one of which is fairly perfect.

Syrnola cinctella A. Adams.—Several of this form, some plain, others chestnut-banded round the sutures, but none quite perfect.

S. jaculum M. & S., p. 304, 1896.

S. violacea M. & S., p. 304, 1896.

Elusa gradatula M. & S., p. 380, 1897.

Styloptygma typicum Tryon. — One specimen, not quite perfect at the base, which with some degree of confidence we place under the above name. It is a shell described as *S. stylina* Adams, from the Philippines.

Odostomia bulimoides Souverbie. — Agreeing with the description and figure in everything excepting size, our two examples being only 3 mm. in length.

O. versicolor M. & S., p. 379, 1897.

Pyrgulina gliriella M. & S., p. 303, 1896.

Turbonilla belonis M. & S., p. 303, 1896.

FAMILY *NERITIDÆ*.

Nerita pica Gould.—A small grey and white mottled shell. Native of Polynesia, and extending as far north as Japan (*N. japonica* Dunker).

Neritina Souverbiana Montrouzier.—Six specimens. A pretty pale fulvous species nearly allied to *N. Rangiana* Recluz and *N. viridissima* T. C.

N. (Vitta) viridissima Tapp. C.—Five specimens, all beautifully fresh, and with characteristic black pencilled markings. The *N. viridis* L., with which this has been confounded, is unmarked, and a native of the Antilles. Tryon associates it with *N. Rangiana* Recluz.

FAMILY *TURBINIDÆ*.

Turbo (Senectus) nivosus Reeve.—A small example.

T. (Senectus) setosus Gmelin.—Worn, but evidently this species.

Alcyna lifuensis M. & S., p. 312, 1896.

FAMILY *TROCHIIDÆ*.

Gibbula fasciata Born. **Monilea carneola** Lamk.—Also a native of the West Indies, where one of the authors has collected it. It is strange to find it in Lifu, but we can see no appreciable difference in the appearance of individuals from these shores.

Oxystele suavis Phil.—Endemic in the New Caledonian group of islands. One example only.

Pyramidea histrio Reeve.—Six prettily coloured examples, all small.

Pyramidea nodulifera Lam.—Juvenile examples only. Also from Philippines.

Minolia agapeta M. & S., p. 312, 1896.

M. pudibunda Fischer.—A pretty pink species, exhibiting some variation, and near our *M. glaphyrella*, from which it differs, however, in colour and sculpture. Many specimens.

M. rhodomphala Souverbie.—Very beautiful, with bright crimson suffusion round the umbilicus. Three specimens.

Solariella (Conotrochus) tragema M. & S., p. 313, 1896.

Euchelus favosus M. & S., p. 311, 1896.

FAMILY *DELPHINULIDÆ*.

Liotia crenata Kiener.—A full grown shell, white, and of chaste appearance and sculpture.

FAMILY *CYCLOSTREMATIDÆ*.

Cyclostrema cingulifera A. Adams.—One specimen, agreeing with Japanese types.

Leucorhynchia tricarinata M. & S., p. 311, 1896.

FAMILY *STOMATIIDÆ*.

Gena strigosa Adams.—Two, strikingly zebra-marked, and quite perfect. An Australian species.

Stomatia rubra Lam.—One, in good condition. Also from Corea and the Philippines.

FAMILY *FISSURELLIDÆ*.

Fissurella (Lucapina) singaporensis Reeve.—Apparently this species. Only two, and both perfect, and beautifully clathrate, white, mottled with brown.

Emarginula pulchra A. Adams.—Two specimens in good condition.

FAMILY *ACMÆIDÆ*.

Williamia radiata Pease.—Proc. Zool. Soc., 1860, p. 437. There are specimens in the British Museum from the Sandwich Isles, Cape Verde, and St. Helena. Mr. Edgar Smith informs us he can detect no difference between any of these specimens, and conjectures it is a Pulmonate.

Pilsbry (Man. Conch., vol. xii., p. 154), places it under the "unidentified and unfigured species" of Limpets, as a synonym of *Williamia Gussoni* Costa, and makes no comment except that it is one of the *Siphonariidæ*. The fact of this most interesting shell occurring in the Loyalty Isles marks a wide extension of its hitherto known range.

CLASS SCAPHOPODA.

FAMILY *DENTALIIDÆ*.

Cadulus viperidens M. & S., p. 314, 1896.

CLASS PELECYPODA.

FAMILY *SPONDYLIDÆ*.

Spondylus rubicundus Reeve.—One dead valve, though very large, and identifiable. A Philippine species also.

FAMILY *ARCIDÆ*.

Anomalocardia scapha Chem.—One perfect living specimen, full grown. Found also in Philippine Islands.

FAMILY *LIMIDÆ*.

Lima tenera Chem.—Several imperfect valves.

FAMILY *GALEOMMIDÆ*.

Scintilla semiclausa Sow.—Characteristic, though not quite perfect. One specimen. Colour pellucid ochreous. Recorded from Borneo.

ADDENDUM.

Mangilia theskela M. & S., p. 97, 1895.—Now that more specimens have come to hand in better condition for examination, we should consider this interesting shell near *M. interrupta* Reeve and *M. bella* Reeve, and therefore coming under the typical section of the genus. We have thought it best, under these circumstances, to give a new figure (Pl. XI., fig. 81), which is all the more necessary, as, owing to a clerical error, the numbers attached to this species and *M. dulcinea* were, unfortunately, transposed.

GENERAL OBSERVATIONS.

In giving a history of the Hadfield Collections of the Mollusca of the Loyalty Islands, it is necessary just briefly to recapitulate what has been already said in the præfatial remarks to our first paper on the subject (*antea* pp. 84–132).

It was in 1891–92, the Rev. James and Mrs. Hadfield brought over a considerable assortment, mainly consisting of the larger and more showy species of marine mollusca. By cleaning out the mouths of some of the specimens, however, we discovered certain minute, but very beautiful, shells, some of them hitherto unknown; and this induced us to ask that further consignments of shell-sand might be forwarded.

Very faithfully did our kind friends attend to our request. The next parcels arrived in 1893, to Messrs. W. Moss and R. Cairns, of Ashton-under-Lyne, whose coadjutorship and help have been invaluable to us throughout, and who placed every facility in our way for thoroughly examining this large mass of material.

Whilst the first collection therefore contained mainly the more conspicuous forms, the next composed an assemblage of intermediate size, very rich indeed, as our lists show, in forms of certain attractive genera, *e.g.*, *Mitra*, *Conus*, *Cypræa*, *Columbella*, etc.; but there were still comparatively few of the yet smaller grade we were so anxious to see, and which we were sure, if they could be procured, promised great results so far as novelty was concerned.

We felt, however, that the time had come for a catalogue of these two consignments, and this was published in the present volume, pp. 84–132, in the summer of 1895 (July–Oct.).

In this article, to which we would refer those who may be interested in the subject, we drew attention to the favoured geographical position of the Loyalty Islands, which are situated

due east of the large island of New Caledonia, and not very far within the tropics, namely long. 168° E. lat. 22° S.

They occupy a very central position in the great Indo-Pacific province, if we may still be allowed to consider Australia a portion of that region. They belong to France, and to French conchologists, notably MM. Crosse, Fischer, Souverbie, Gassies, Lambert, Montrouzier, and now Hervier, we are indebted for our knowledge of their mollusca, M. Crosse, for instance, has only lately (Journ. de Conch., vol. xliii.) concluded his exhaustive list of the terrestrial mollusca of the New Caledonian region; but, so far as we could gather, no catalogue existed of the marine mollusca of the Loyalty Islands, which include the three islands of Lifu, Maré, and Uvea. This led to our publishing a list, as complete as we could make it, consisting *only* of those species found in the Hadfield collections, which number nearly 630 species. We now regret having mentioned the terrestrial mollusca, which were insignificant in number, and of no novelty; but it was far otherwise as regarded the marine portion, more particularly the *Gastropoda*.

In this enumeration twenty-one new species were described, in one or two cases from single or but two or three specimens. It is very gratifying, therefore, to be able to say, now that the third consignment has been thoroughly examined and overhauled, that some of the species are represented in considerable numbers, *e.g.*, *Minolia glaphyrella*, many; *Mitra nitidissima*, many, including a crimson-red variety, the normal form being pitchy shining black; *Mangilia theskela*, a great number; *Murex* (*Ocinebra*) *benedictus*, twenty specimens; but on the other hand it is curious that *Diala Hardyi*, of which there are many in the former collections, is entirely absent from this assortment.

This third consignment was forwarded to Mr. R. D. Darbishire, early in 1896, and consisted of a large packing-case, filled with partly-sifted shell-sand. When treated to further sorting through a sieve, the richness of the material

became evident. Shells new to us appeared every moment, all minute, but all exquisite either in colour, design, or detail of form.

They could not all, of course, be called specimens in the highest state of perfection, as in hardly any cases is the operculum present, or traces of the animal, proving they had been collected as recently thrown up drift, but in the majority of instances, so far as the actual shells are concerned, they are in as good as a living condition.

We forthwith determined to lose no time, but devoted the best part of five or six months to the elucidation of these little forms. It was no slight labour to sort the material, but this was effected more rapidly than we had considered possible; and that done, and the published literature on the subject well examined, one or other of us took all the species about which there was the least doubt for close comparison with the vast collections of the British Museum, South Kensington, and it is, we must admit, no mean task to take stock of what our national stores possess in such genera as *Rissoa*, *Odostomia*, or the *Pleurotomidæ*.

Very detailed investigation into the Philippine species was carried out for comparison; especial attention was also given to Mauritian species, for although separated by nearly three thousand miles in distance, there seems much of cognate character in the molluscan fauna of both these localities. Two instances will suffice. The original type of *Mitra fulvosulcata* Melvill, was collected in Mauritius; it has been found common in Lifu. And, secondly, we believe that Dr. Jousseaume's original and hitherto unique type of *Lienardia ocellata* was Mauritian; we have found two (one of which we have sent to the British Museum) of this most exquisite of all shells, in our Lifu material.

We had already drawn up descriptions of some forty species, when Father J. Hervier's first communication, enumerating several *Pleurotomidæ*, from Lifu and New Caledonia,

mainly collected by Father Goubin, S.M., was published. We found that in those accurate and lengthy diagnoses, several we had signalized as new were already described, *e.g.*, *Clavus gibberulus*, *Glyphostoma Aubreyanum*, *G. Crosseanum*, *G. strombillum*, and *G. melanoxytum*, and we are glad that we were thus spared the reduplicating of names, by the appearance of M. Hervier's article just before the publication of our own.

Since then,* this author has issued descriptions of new *Clathurellæ* and *Daphnellæ*, some of which may possibly be identical with ours, but as none of them are figured, it is difficult to form an opinion.

We think it of such importance for future malacologists, who in days to come may be studying or monographing the *Pleurotomidæ*, to have a clear understanding as to actual dates of publication of species, described about the same time, as influencing the law of priority, that no apology is needed on our part for calling attention to the fact that must already have been noticed with regret by many, that the Journal de Conchyliologie is now antedated by exactly one year.

The *actual* date of publication of M. Hervier's first communication, with descriptions of species of *Drillia*, *Clavus*, *Surcula*, and *Glyphostoma*, was June, 1896 (J. de C., vol. xliii., no. 3, pp. 141-152) dated (erroneously) as "1 Juillet, 1895." The date of 1895 has been subsequently given (*op. cit.*, vol. xliv. no. 1, pp. 51-96) by M. Hervier in his résumé of these same species, whereas none were described, as already said, till the following year, the first portion (vol. xliii. no. 3) in June, the second (*op. cit.*, no. 4) in September, 1896. His next instalment dealing with certain new *Clathurellæ* and *Daphnellæ*, appeared in J. de C., vol. xliv., no. 2, pp. 138-151, and was published April 1897, five months *after* the appearance of our descriptions of eighty new species from Lifu, including nine of these two genera, on November 12th, 1896 (J. of Conch., vol. viii., pp. 273-315).

* Journ. de Conch., vol. xliv., no. 2, for April 1, 1896, published April, 1897.

We are ignorant of the causes which have led to the Journal de Conchyliologie so falling into arrears of date, but it is all the more important to call attention to this fact *now*, as when the volume is bound up, no sign would appear from internal evidence in the serial itself, that it *was* antedated.

For ourselves, our first communication on Lifu shells was published October 15, 1895; our second, November 12th, 1896; and our third, with description of *Drillia cygnea*, April 1, 1897.

The extraordinary wealth of these islands is evidently very far from being exhausted, as is evidenced by our having described 106, and M. Hervier 43 new species in so short a period, and there is scope, we feel sure, for many an investigator in the future, as some of these endemic little shells are decidedly local. We should like, for example, to see collections from the island of Maré. We may add, that of the genus *Triforis* we have many species, but have not ventured to identify them, without submitting them to M. Jousseaume, who has monographed the genus.

The total number catalogued by us in our two lists amounts to the respectable total of 860; mainly, as we have said, in marine *Gastropoda*, for the *Pelecypoda* are not at all well represented nor are they in such good condition.

In conclusion, we must acknowledge that Mr. Tryon's "Manual of the Mollusca" has been of much service to us, especially in the reproduction of figures, otherwise difficult of access. The arrangement we have adopted, and in the main adhered to, is that of the late Dr. Paul Fischer in his admirable "Manuel de Conchyliologie," 1887.

Our best thanks are due to Mr. R. D. Darbishire, primarily and especially, for allowing us such free access to the collection; to the Rev. Lewis Shackleford and Mr. J. Ray Hardy for aiding us materially in the sorting and investigation; and to Mr. Edgar A. Smith for the painstaking kindness invariably

extended by him to all who ask for help in their researches at our Natural History Museum, S. Kensington.

We may add, that so far as was possible, our National Collection has been supplied with examples of the new species, many of which are also contained in Mr. Darbishire's and our own private collections. The original types are *all* in the Manchester Museum, Owens College.

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